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CACCATTCCC CCTATCACCG GCATTATTGC CTCAGCAGGA TGCGCCATCG GTCCAGTCTT        180

TTGCTTCGAT ACCCTGCTAC CTACCCGCTC CCGCCCTGGC GGATCCCGCC TGCGCCCCCC        240

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CCTGCTCGAT TCAGTGCGCG CAAAAGCATC CGGAGACGAG CCTGCACCCG AGTATGCCGT        360

GCTCAGTGGC CAAGCAGAAA TGCTGGCCGA CGCGGCCTTC ATAGCTACCG TAGAGGAAAC       ·420

GCTGCGCTCT TGTTCCTGCG ATGCAGAAAC TGCTTTGCGC AAGGCAATTA CCCACGTGAC        480

AGATGCCCTC TCTGCTACCT CAGACGAGTA CCTGCGTGCC CGGGCAGCCG ATATCCGAGA        540

CGCGTTTAGG GTGTCTTCGA CGCACTTGCG CATGACACCA CACCCACCGC AGnAAGCTCT        600

TTGCCAACAC AAGGGATTGG AAATAGCACC CCACACTCCC CCTGGGAGCC TGACTTTAGC        660

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CTGCACGAGG CAAATATCGC TGGTTTGGTA ACCGAAGTGG sCAGCGTAAC AAGCCATGTC        780

GCCATCATGG CGCGCGCGTG GAGTCTTCCC CTGCTCGTCA GTGCACAGGG ATGTAAAGAC        840

GTTGCACAGT ACGTGCTCCG TGTGCGGCAA ACTGCTCGTG CCACCGATGA GGCGCTGCGC        900

GCACTCCTCG ATGCTGAAAs AGTGGGGGAA AAACTGACGC TCTAGGAACC CTCACCGTAA        960

ATCCCGACGT GCGCGCGCTG CgCACrCGCA TGCCTcACCC TTTCCTCACC GTCAAACACA       1020

CCAGTACAGC TGAACAGAGT CCCCCGGCCG CCTGTGTGCT AAACGCACCG CTGCGCACTT       1080

ACTCAAGTGA CGGTATCCGT TTTGAAGTCG GGGCAAATAT CGTTATGCCC CAGGAAGCGT       1140

GTGCAGCTGC TGCGCTCGGA GCAGCAGGCA TCGGACTGTT CCGTTCGGAG TTCTTGCTAT       1200

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TGCCAGACCC TGCGCGAATG TGCGCACTCT CGGACGCTGC TGAACCGTGT GCACACACCG       1380

CTTCGGAGCG CAATCCTCTT TTAGGGTTAC GAGGCATCCG CTACTGCCTC GCACATCCTG       1440

AGCTCCTGAA AGTGCAGCTT CGTGCAATGt CCGCGCCGGA rCkTGCGCAA CATGTGCAGA       1500

AGGGnACTGC GCATTCTCAT CCCCATGGTT TCACGGGTGG AAGAAATTCA CGCCGTCGCC       1560

GACCTCATCT CTGAGGTAGC CGAcGAgTGT GCCCGCGCGC ACGTGAGTAC ACCCGATCGG      .1620

GTAGCACTCG GCATTATGAT CGAAACGCCC GCTTCGGCAC TGATGGCAGC AGAtTCGCTC       1680

CCCACGTGGA TTTTTTTTCC ATAGGGACGA ACGACTTAAC CCAGTACGTG TTCGCCGCCG       1740

ATCGAGAAAA CGAACAGGTC AGCAGCTATG CCGATTACTT CCACCCGGCA CTCCTCCGTC       1800
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CGTGCAGCTT TCAGATGCGC AGTCAGTCCG CACACTCATC GAAGAACATC TGCGCACCGC      2100

AGGTATTACG CTTGAGAAAG ACGAGGAAGA ACCCTCACCC CCTCGATCCC CATAGCGGAG      2160

GAGGCCTCAG GCGTTTTCTC CATACACAGA AAGGAAAAGG CAATGGAAAT CGAAGAATTT      2220

GGTCCACAAA TCACCGCCCT CGAGGCGCGC GTGCAGGAAG TATGGGGGAG TCTTTGACGT      2280

TGCCGCATAC GAGGCGCGCA TAGCAACGCT TGAgGCTGCT GCAGCAGCGC CTGACTTTTG      2340

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CCCGCGAGGC GCAAGACGCA TCGCTGGAGC CAGAACTTTC CTCCCTTTTT TCAGACATTT      2520

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CCTTTGGTTT TCTCAAGGGA GAAACGGGGG TACACCGGCT CGTGCGCATC AGTCCGTTTG      2820

ACTCTGCCGC GCGCAGACAT ACCTCTTTTA CCTCCACCTA CGTCTTCCCC GTATTAGACG      2880

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CACACCCTCT TTTCGCAACC GCCCGTACGA CTGCTGCGCA cTGCTGtCTA CGCCTCCTGC      3540
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CCCCGCGCGG ACAAAGACAT ACAAACATTA ACGCACCGCG ACGAGGCAGA AGAAGATCAG    5040

GAAGAAGATT CCTAAAGGAG CGTGAAGGTG GGTTTAGGAA ACCTAGCACA GAAAATACGA    5100

CGCCTGCTCG GTGGACAGGC GCCTCTGGAC GAAACGTTTT TTAGCGCGCT TGAAGAGCTG    5160

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GCCGCGCGCA CACGTTCTGT ACATACGGAA GACGCAtGCG CACGCTCTTT GCGGAAATTA    5280
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TCAGACCCAG AAGGTGCATC CGATACTGTT TGCCGCCGCA GATACGTTCC GCGCAgCAGC    5460

GGCAGAACAA CTCGCACACC ACGGTGCACA GCTAGGCGTG CGCGTCATTG CGCACCCGGG    5520

GGGAAAAGAT CCTGCTGCaG TGGTATTTGA CGCAGGAGAA GCCTTGCgcG cGCAAAAGCG    5580

sGGTCTTTTA CTCGTTGACA CCGCAGGGCG ACTGCACAAT AAGACGCACC TCATAGCGGA    5640

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CGCAAAAAAC AGACACTCCG CTTGATTCCT CCaGtACGCA tGaCCTCCCC TGAGGAAGCA    6120

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GCGCTATAAT TTTTCCGGAA AGATCGTCGC GTACGAAATG CACACGCGCG GGGTACTGGT    6480

ATACGCACGC ACCTATCGGT ATGnAnCGCA CGCGCGTATA TGTGAAAAGG AAGAAACAAC    6540

TGCTCGAGGG AATGAACGCA TTACGTATGA                                    6570
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(2) INFORMATION FOR SEQ ID NO: 42:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 19483 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 42:

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420

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CTACCCAGTT GTAAAAAGAG tGTTCGCGCG CGTCCgTGCT CTCCACACGA AcGGAcTCCG      120

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AGGGTGTTGT GTACgtsTGt GCGCACATGT AGCACCTTTC CCATACGGAG ACACAGGGAG      240

AAAAGTTCCA AACGGGATGT GCACGCGTAA AAAAGTGAAG ATGCGCACAG CAATAAAAAT      300

AGGCGGATGC CTATGTGGTA TCCTGCATGT ATGTGCTGGT TGATTTGTGT AGCGCTAACA      360

ACACCGGTGC TGAAAAATGT GTGCAGGATC TTCAGAGAAA AGAAAAAGC GAGGTAGATA       420

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AGAAGGAGAG CGAAgcTTGC GACTTTCGCT ACGGGAGGAG CACGGTGAAG CAGCGATTGC      600

CGGCGTTCAT AAAGAGAGAA AAACATACAT TTCCTTGACT CCTCCTAGCA GGTGGAAGTA      660

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CTGCACAACC TGACGAACGC TGGGGTAATC TAAGTTTGCA AACGGCTCGT CAAGAATGAC      960

TACCTTTGCA TCCAAGGCGA GTACGCCGGn CAACGGTTAG GCGTCTTTTT TCTCCACCTG     1020

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CGGCGCACTG ACACCTATGC GCTTTCGGGC GAACAGCGCA AGGCGATTGA TGCGATTACC   3540
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TATCCTGCTG TTTGCGTGTT TGGTTGACCG GTAGTATGCG GTGCCTGGTA TAGGTGCGGG   5160

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TGCAAGCGGC GTAATTACAC CACTTCAAGA AACCGACGTA ACGTTCAGGA AAAGCTCGAG   6960

CTCAGGAAGT ATTGTCCTTT TGAGCGTAGA CGTGTGCTGC ATAGAGAGGC GAAGATAAAG   7020
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TCCTGGCCTG AGTGCTTTCG AAAAGGTGTT TCATGTTGAA GTTCGCAAAG TTTCGTAGGG    7200

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TTAAGGTAGT GCTCGTCTCT ACCGTTGTCA TGGCGCTTTT CCTCGGGCTT ATCGATGCTC    7320

TGTTCGTGGC GTTGCTGAGT TTCTTCTTCT GAGGGGATAG AATGGCGAAA GAGTGGTATA    7380

TTCTGCACAC ATTCTCGGGT CGCGAGGCAA GGGTGGAGCG GGCTGTCCGT ATGCTCGTGG    7440

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TGCTATGGAC GAGGATCGCT ACTACATTGG GCAGGATTCT ACGGCGGTAG GACCGGACGG    12240
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AAGCAGATTC CGCTCACTGA GCGCGATGAA GAAATGACGA ATAAGATTGG CTCTAAATTT     13980
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AGAGCGCTCG GGGGTGGTTC GCGCAAAGCT TCAAGTGCCC TGT                         19483
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(2) INFORMATION FOR SEQ ID NO: 43:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4724 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 43:

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TCTGTGGATC TGTCGGGCTT TTACACGGAA ACTCTCTTTT ACGGAGGTAT GGAGGAAAAG         240

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CCGATTGCTG CACACAGGGA TACGGAACTC GGCGGAACGA TCAGCGACGA GGTTAGTGCT         720

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GATAGCGTAC AGGTGCACGG CGTTCGCCAA CCTTCTTTGC TCAGGAGTGG AACGGCTGAA        1080
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CCsCACGTAC GGTGAAGAAT TTCTGCAGTC CCTGTGGGAT GTCCTGCAGA AACGAAtCTT    1380

GCTTTTGGAG AGCGTGTGAT CATTGGAGAG TTACTCCAGC TTGACCTAAG CAAGGGCACC    1440

TACGTATATG AGCCGCTGCG CTTGCATTGG CGTTGACGGG CACTGCTACG CTTGATCGAG    1500

CGCACGTnGT TTGCTACGGT TGGCGCCGGT TTTTGGGGAT GTAGCTCAGT TGGTTAGAGC    1560

GCTTGCATGG CATGCaAGAG GTCAGGGGTT CGATTCCCCT CATCTCCATC GCCGTGTGTG    1620

AGGGAGGGGG TGTGTCTGAT TTAGGTTTAG ATCCGGATCT GTTAGCTCTG CTGCAAGATA    1680

CGCCGCAGGt GTGCCGTCTG AGCATTCTTC TGCAGGGAAG GGTACAGCGA TGTCGCCTAc    1740

CGGGACGCGA GATCCGAGTG ACGTTGATCT TTCTGAGCGT AgTTTTCCCT TGGTTACTGA    1800

GTTTCAAAGC AAGACCCCGC ACCAGTTTTT TGAGTCAGCA GAGTTTTATA AACGTGTCGT    1860

TTCGGATGAG TTGGAAGTTG GGCAGCGTGC GCATGCGGCT TTGGCGCGCT ATTTGTCCAC    1920

CACTGACTTA AAGGATCGCT CTGTGTGCCG GCAGCAGCTT ATTAGCAGTT ACTGGCAATT    1980

AATGGCACAG ATATCGGGGA AAATCGGCGG TGGGTCGGCG TGCATGGAAA AGCGTTACGC    2040

ATTGCGCTAT GGACTGTTGC TTCCTACCTT GTTGACCGCA TCCCAGAAAG ATATCTTCGC    2100

GCGGATTATT GAGACGAATA GTTTGCAGCA GCCTCTTTAT TATCTGGATG AATGGCTGAT    2160

TGCGATTGGT TCTGGAAAGG TTCGCCCTTC AAGCACCGAC GAAgTGCAAG TAAAAAGGAA    2220

AGACGATGTC GCACGCGTAC GGCAGGCGTA TGATAAAGCG TGCGGGCAGT TGCAGAGTTC    2280

TGAGCGTCTG TTGCAGGTGA GGTCGGCGGA gcGTGCCCGT GTGGAAGAGG AGGTGAAGAA    2340

CAGAATTTCG CGTCTTTTCG TGCACGAATC CATTGAAGGT CTCCCTGGGG TGACAGCAGG    2400

TTTCAACGAG GCGCAGAAGC AAGGAATCTC GGAGATCCAT GAATTGTTAA AAAGTTGTT    2460

GGGTATAGAT CGGGAGTTTA ATGGGTTATA TGCGGGCTAC CGCGCTTCAC AAGACGCAgT    2520

GCATTCCCTG CGAGAGAAAC TAGATGCGCC CAATGCGGAG AACAGTTCAG CAGTGAGTAC    2580

GGAGTACGAT aCCGTGCGCC AAATGATAAA GATGAGCTGC GGGCGCCAGG GCAACCATTT    2640

CCCCCTCTTG TCCAGAGAGT ATTTCCGTTC TGCGGAGCAT GAGATTGGCA CGCGGGAAAA    2700

TGTATTGAAA ATTATGGCTT GGATTGAAGG TCTGGATCCG GAAGCGTATT GCCGTCAGTA    2760

TAAGCAGCAG GTAAACAGGA TTCCGCCATT CGTGGTGCTG TTGCCTTCTT ATGGGGACAT    2820
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AGGATTTTGT TGGGAGCCGT TTGATCGTTA CAATCGCGTG ACAAGCCGTG GACGCGTTGC      2880

GtGCCTATGT ATGGAAGGAG CTTGAAGCTT GCAGTTATTA CCGCGACGGC GGATTTACGT      2940

TGGCAGGTTG CAAAGGAAAA GGCTTCGTAT TACTGGATGG AAGAGGGCTT GACGGGGAAT      3000

TATTATCAGT GGTTTCAACC CCAAAAATTA AGGGGTGATG TAAAGGAGTA TTTTATTGCC      3060

GATTACACGA CCTGGCTCCT GAAGGAAAGC GAGGGCATCC AGAAACTGGA CAAAGAGGTC      3120

CGCAATGTCT TTTGGCGCTA CATCCCCTTT CCCCAAAAAA TCAAAGACGA ACTCAAGACA      3180

AAGTCCTTTG TGTACCAAGA GCTTTGTCAG AAGGACGCCA ATCGCCAGGT ATCTGACGGC      3240

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ATTGATGGGC AAGTCTACTG CAAGCAGGCG TGCGAGGTAG ATCCCATAGT GAGGATGATC      3420

CTCAATCAGT GAGATGAACT TCATCTTTGA TATCTTTACC AGTGTGCCTT CGCCTACTGA      3480

TACAATCGTT GCAGAGCGCC GGTTGTTGAG CAAGAACGAC ATTTCCCCGA TGAATATGTC      3540

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TTTCCAATCA AAGCCTGTGC CTTCGTCACG AATGGTAATG CGTGTACGCT GCAGTGTAAT      3900

GTCATAGGAA ATATAGATTT TTTTCgCGCT AATGCGCGGG TCCtGcTTGC GCAGAGCAAT      3960

CAAATCAAAG ATATCCTTGC GCTGTTCGAG CCaCTCTGTT TTTTCGTCGT AGCTAATGCC      4020

GCAGTTTCCG TGCTCCAGTG CATTGAGTAA CAGTTCCATC ATTGCGCCTT CAAACGAAGT      4080

GCGTTCAAGC TCATTGATAC GGTTGGTATT GTACAGGTAC GAACTAATCA AGCTGGCGTA      4140

AAAGGTAATC TCAAAGGAAT CGGTGTCGCA GATAAAATTT CCCTGCTCGT GTCCATGTGC      4200

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CTGGGAGGCA TGCGCTTCAA ATTCCTGCCG CGTGGAAACT GAAAGGAAAT TCGGGTCTTT      4320

GCGATTTACG ATTTTTATTT TTTCTTCCAT CGAGTTAGTG ATAGCAATCA CCCCACCAAA      4380

TAGAAGCCAA GGATCATCCT TTATAATTTT TAAACACGCT TCGCTGTCGA CGTTTGGGTC      4440

ACCAAAATCA ATAATCTTAA TCTCAGGCAT CTCGAAGCGA AAAACGGATG CTATCTCATT      4500

CAGACGAGAG AGCGTCTGAA TGTGTATATC CACGCGTTCT CCAGTACACG CACCGTTAAg      4560
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GCAGATATGG TAGACGTAAC CGTACTGATA AGAGGTATTT gCTCATACTC ATAATCCTTg   4620

TTATAGAAAT CGAGCCACGG TAATCATCGG TTGACTTATC ATcGAGAATG AGATCTGGcT   4680

ACGCATTAgG TATATCGTGT GGGGGCATGC GCnTGGGAAC AGGC   4724

(2) INFORMATION FOR SEQ ID NO: 44:

          (i) SEQUENCE CHARACTERISTICS:
              (A) LENGTH: 14822 base pairs
              (B) TYPE: nucleic acid
              (C) STRANDEDNESS: double
              (D) TOPOLOGY: linear

          (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 44:

TAGCCTGCCG TGGCGCACCC CTGCTTTGCT CCACGCCGCG CTCTTTACGT TCCCCGCACA   60

CATGCGCTAC ACTCCCCGCC ACCGCCGCAG GcAGGGCCCC GTGTTACAGG ACCTATCCGC   120

AAATGCCCGT AAGTACTGCT CGAGCTCGGT CAGACCGTTG CGCGTGAGGC TCGCGCCTCG   180

CTCCTTCAGC CAGAGCACAT TCTGCTCGCC CTCATTCAGC ACAAAGTAGG CCGCGGCTAC   240

AAGCTCATCG AAAAACTCAT TGAAGATGTC GCTACCGTCC GCCTCATCCT CGAGCAACAC   300

GTCCTTACCA ATGAGGGAGA CGTCGCCAGT CCCCAGGACC TGCCCGTCTC AGGACGCGTC   360

AAACACTTGC TCGACATCGC AGCAATGGAA GCACGCTCCc TGCGGTGCGC TTACATCGGT   420

ACCGAACACC TCGTTATCGC CTTTGCCCGA GAGGAGCAAA ATCCTCTCTT CCAAAGCCTC   480

ATCCGAGAAG GACTCTCGCT CGATGACCTG CGAAACGCGA GCATTATATC CTCACCTCAT   540

TCTGATACCA CCCGCACCCG GCTCGAGCGG AAAGTTGCAA GTGTCCTTGA CGAATACGGC   600

ACCGACCTTA CCGAACGCGC GCGCGCCGGC GCCCTCAATC CGGTCATCGG ACGAAACAAA   660
                                    /
GAAATTACCC GCGTCATTCA AATCCTGTGC CGGAGAGGAA AAAATAACCC GGTGCTCATC   720

GGAGAGCCAG GTGTCGGGAA AACTTCCATC GTTGAGGGGC TCGCGTACGC CATCGTTCGG   780

GAGGAGGTCC CGCACATCCT GCTGCACACC CGCGTCGTTT CCCTAGACCT TGCCGCCGTC   840

ATAGCAGGAA CAAAGTACCG CGGCCAGTTT GAGGAGCGGC TCAAACGCAT TATTAAGGAG   900

GTGGAAGAAA CTGAAAAAGT CATCCTTTTC ATCGATGAGC TGCACACACT CATCGGAGCA   960

GGAGGCACGC AGGGGTCTTT GGACGCCGCC AACATGCTCA AGCCGGCCCT TGCACGCGGA   1020

CAAATCCAGT GCATTGGGGC AACAACCCTG GCAGAGTATC GCCGTTACTT TGAAAAAGAC   1080

GCAGCTCTCA CCCGCCGATT CCGATCGGTG CTCGTGCGTG AACCGAGCTT TGAAGAAACC   1140

TGCACTATTT TACGCAAAAT AAAATCACAC TACGAACGAC ATCACCAGGT GATATACCAA   1200

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AGCGATGCGC TTGAAAAAAT TGTTGAGCTT TCACGGCGCT ACATCCCTGA GCGGTTCTTT    1260

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GCGGATACGC AGGTATTGCG TTCCTTTTCC ATAAAAGTTG CTAATCTTAC CACAGAGACT    1380

GAGCGCGCCA TTGCGCTTGA AGATTGGGCG CGCGCGCGTT CCTTACACAC CGATGTGGTG    1440

CAGCTGcGCA GACGGCTCCA CGCGCTGAAG GTAGAGTGGA GCGCGCGCGA AgyGcgTCTA    1500

TCTTTGcAGA AGATGTTGCA CAGGCTGTCT CTCTCATGAC CGATATCCCG GTACATTCGC    1560

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TCCAGGTGTT AGAAGAAGGA GAGCTGCAAG ACAACCTGGG GCACACGGTG AACTTCCGCA    2040

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TGCAGCAGGT GGAGTGTCTG TGCACGGAGC GCGTCCAACC CCGCGTGAGT CTTTGCGCTT    2880

ACACACACGA ATGCgCGCGG CGCACGATCC CTCACCTCCC CGTTCTTTCC CCCTGCTAAA    2940
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CACTGCTCCC CCGCCCCGCG CGCGTCCTGA CTGCGCGCAC ACGACAACAC CGGTGCCGAT    3000

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TGGGTAACTA CCACTACCAA GGGTACTGCA CAGTCCGAAA GAAAAGCGCA ATCTGCAGCC    3120

TGCACACCTG CACGTCCATT AATAATGTAA AAAACGCAAT CTGCTCCCTG CAAGAGTTGC    3180

TCGCTGCGTA CCACTCCCTG TGCCTCAATA GGATTGTCAG TTACTCGTAA GCCTGCCGTA    3240

TCACACAGAC GCACTGGAAT GCCCGmTAGA TCAAGGTCTG CTTCAAGCCA ATCGCGCGTT    3300

GTACCCGGAA CGGACGAAAC GATGGCACGA TCCTGTCCTA AAAGAGCGTT GAAAAGAGAT    3360

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GCACGCCCCC ATGACAAATA ATTTCTACCG CATGTTCTCC CGTAAAACTG TGCGGTGCGC    3840

GGTACACCAG CAGTACTACC TCATCCACCC GTGTCTTTCC GTCCAAAATC CATCCGTGGA    3900

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CCCTCACGGC CGTGGGCGCA GGTGCGTGAA AAGGCAAGCC GCCTGCAAGT CCCACACGGA    4140

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aCCGAGAATC AGCGCGCCAA AAAGTACTGC GTTTAACCAA CCAAGAAGCA CATCAATAGG    4620

ATAGTGCACG CCCAAATaCA CACGAGAAAG CCCAATGACT CCTACAAATA GCACGCCCGC    4680
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TCCCGATCCC CTACCTGCCT ATCGGTTCCA CAACCTGGCG CACAAAAGCA GGGAACAGGA    4800

GTCTTCGCAG ACGGATAgcT ACGCGCGAGC AACACAAACA AAGCACTCGC CTGTGCATGC    4860

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CGTAGGCAAT GGCTAAACCC TTTCGGTACT CTACGCACCA CAGCACCCAG AGCGAACACA    5040

GGGCGATACC CTTCCCTCCA AAGAAGGTAA AAAGAACAAC CGCGTGTGTT ATCACAGGGT    5100

GCGCAgCCTG cTGCACCGCG TGTATGACGG ACAAGTTCCA GAATATAAAT TCTTCCATGG    5160

TGTCCTATCC TCACTTTGAC ACGCGCGTCT GCATCGATCC GCGCTCCGTC CTGTGCGGCA    5220

GATCCTCAAG CCAATAAACT CTATCCGGAG CGCGCTCCTG CACAAAAATG gCGCTGTAGC    5280

GCCCTGaATG CTGCACACGT ACGCTGCCAG GAAAATACTG CGTGTGCAAA AACCACACAA    5340

GATCGCACAT ATCGTCGCGC GAATGgAAAc CGAGTAACGG TAGTAGAGCG TTGCATCGGT    5400

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CTCTTGTTTG ACAAACTTTC GCTCTTCTTC AGGGAATACG ATCTATTTGA AGGTGCAAAG    6360

CAACGGAGCT TTACCGCGCT TATTTTTAAA CTTTCCCGAG GAACGGTTGA TATCTCTACC    6420
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CTCAATGTGG AGGAGCATCT GCTACGGTTC TTCGGCAAGC ATGTAGAATC GGTGTTTGTG   6480

TATACACAAA TTTTTGTCAA AAACATCGCT CGCGCAgCCC TTTCCACGTT GTTCTTTAGT   6540

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GCGCTATCGT TAGACAAAAA AAGGTCTCCG TCAGAACAGA CCCGCACAGA TGTGTGGTTG    8280

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CACTGGATTC CACACCAAAA TATCGCCGTT CAGGCCCTTG TATTCCCTTC GGAAGGCGTC    9660

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TCCGGGCGGA GcGCGATCAT GTGTACAAAC AAACCCTCAT TATCCTGAAA GCCGTAGCGG     10080

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AATGTGGCGC GCGGTGCGGA CCCTGCTTAT CATCTGTGCG GGGGGAACCG GAGCGCTGTG     10500

GGCGCATCCG CACGTTTTTA TCCGCACGAA AGTAACCTTT CAGTGGCAGA AGGGGGTGCT     10560

TCAACGCGCG CATATTACCT GGGAGTTTGA TCCGTTTTTC AGCGCCGATA TCATTAGCGG     10620

ATACGATACC AATAAAGACG GGCTGTTTGA CAAAAAAGAA ACACAGCAGG TGTTTGAAAA     10680

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GCACGCTAAG TCCGCACCCC CAGGAACCCG GCGAACACTG TATCTTGCAC TCTATGACCA     10920

CTCATTTTTC TGCGACTTTC GTTATGCAGA ACACGACACC GTACGCTTTG TGTGCGATAA     10980

GGCGCGCGTG CAGCCTTCCT ACGAAATTGT TGAAAACCGA ACCGCTCCTG TGTACTACGA     11040

CCCCTTCGAT AGCATAGAAA GCACTCCCCA ATACGAACAC TGGCGTCCCG GTCTGCATAC     11100

CTACTACCCA AAAGAGATTC TCCTGCGCTA CACTGCCCCC TAAGGTCCTT TTCCAAGGGG     11160

AGTTGAGAGC GTATGAAGAA AGTAGGGGTk cgCGTTCGCG CGTGTATCCT GTGCGCGCTT     11220

GCCGCGTGcG CCACAGGCGT CCTTGCTAAT CCTTTTTTTG GCGgcGCTCC CGCGCGCCCG     11280

CGgAGGCAGC GCACCCCGGA GCTTTTkcTG CGCAGATACG CGCTCGTCCA TCAACGCCTC     11340

GGTGCCGCCA TAGTACAGTG GAGCAAAACC CATTCAACAC GCGCGTGGTG GATTACTGTA     11400

ATGCTCTCCT TTGCGTATGG CGTTCTGCAC GCCTTAGGAC CAGGACACAG AAAGGCAGCG     11460

CTTTTTTCTT TCTACCTGGG GAGGAACGCA CCTGTGTGGG AACcTGCGCT CACTGCAGCG     11520

TTACTTGCGG CGTTGCATGG CGCAgcTTtC CCTGCTCTTG CTTTCTGCAT TTAGAGGTGT     11580

TTCCGGCGCA ATCGGTGCAC ACAGTGCACG CACAATGTGG TACATGGAGG TGGGTTCCTA     11640
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CAGCTCCAAA CACACGCCCC TGCCCCTTCC CTCACACTGT TGCTTCGTAT GTGCATGATG    12960

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TGCTCGGTCC ACTGTTAGAA GACGCGTTCC GGACGCGCAA ACGCACGCGC ATATACGGAA    13320

ACTATGGGGT ACAGGAGTCA GGCGAATGAG TACCGCTTAT CTTACGCGGC AGCACCGTCC    13380
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CTTCCCCAAG CGGGGCGCCG TGGGCACGCG CGCTCCCTTC AACGGTAGGC GCACCCTTTC    14640

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GATCCATAAT ATCCGTATAC GAATACATAG AACCGCGCAg CACCTGCCAG CCATACGCTT    14760

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GT                                                                  14822
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(2) INFORMATION FOR SEQ ID NO: 45:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16710 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 45:

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CGGTCTGAGG CCAAAGACTA CCTGTGTGCC AATATAGTTT TTTAACAAAA AGGACGCGGG       180

GATATCCGGT CGAAGAACAA AAAGACCTGC ATCAATTTTT ATCCCATGCT CATCTTTAAC       240

AATCGTAACA GGGAAACAAT TCATAGGAGG AGAACCAATG AATTGTGCAA CGAACGTGTT       300

CGCAGGATGC TGGTAGATAT GGAGAGGAGA ACCAATCTGT TGTACGCACC CGTCTTTCAT       360

GATGACAATC TTATCTGCCA TTGTCATCGC TTCCATTTGA TCATGGGTGA CGTAAATCAT       420

CGTGGCCTTT AGGCGCTTGT GAAGAAGAGA GATTTCGGAT CGCATTTGCA CGCGCAACTT       480

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CAGTGGTTCG ATATCAAGAA CACGCGCTGC TTCGTGGACA CGGCGGATGA TTTCTTGCTG       660

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CGGCAATTCC GTTATAGAGA CAAATATCAA TGAGGAATGA AATCTGCACA CGAATGGGAC    2040

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ACGATGCGAT ACAGTCTTCA TCAGGATGTT CATGTCCGAG CAAAAGAAAG GAGCCGTGTA    2160

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TGCAGGTGAG CCGCTCATGG TTGGAGGAAG GCCACTGGTA ATGCAGCGAG TGAAAGAGGG    9360

AACTGTCGGC TAGGAATATT CACAGAGCAT TTGGTTTTCC GTGTCGGATA GGGGGAGCGC    9420

AgcATGAACG TGGGATTTTT GGGTTTTGGA GCAATGGGAC GGGCGCTGGC AGAAGGGTTG    9480

GTGCACGCAG GAGCGCTGCA AGCGGCTCAA GTGTACGCCT GTGCGTTAAA TCAGGAAAAG    9540

TTGCGTGCGC AGTGTACATC TTTGGGCATA GGTGCCTGCG CGTCAGTTCA GGAACTGGTA    9600

CAGAAAAGTG AATGGATTTT TCTTGCAGTC AAACCATCTC AAATCAGCAC GGTACTGCGC    9660

GATCGCCAAT CCTTTCAGGG AAAAGTGCTT ATTTCCCTTG CGGCGGGTAT GTCTTGCGCT    9720

GCATACGAGG CATTGTTTGC CGCGGACCCT CATCAGGGTA TCCGTCACCT GTCACTTTTG    9780

CCGAACTTAC CTTGTCAGGT GGCGCGGGGG GTGATCATTG CAGAAGCGCG CCACACCCTG    9840

CACCACGATG AgCACGCTGC GCTTTTAGCA GTGCTGCGCA CAGTTGCACA GGTAGAGGTG    9900

GTGGACACCG CGTACTTTGC GATCGCAGGG GTGATTGCAG GCTGTGCTCC GGCGTTTGCC    9960

GCGCAGTTTA TAGAAGCGCT CGCTGACGCA GGGtGCGCTA TGGCCTGGCG CGCGATCAAG   10020

CGTACCGGCT TGCGGCACAC ATGCTTGAAG GGACTGCAGC GCTCATACAG CACAGTGGTG   10080

TACATCCTGC ACAACTTAAA GATCGCGTGT GCTCTCCTGC AGGGAGTACT ATTCGCGGGG   10140

TGCTTGCGTT AGAGGAGCAG GGATTGCGCC GTGCAGTTAT ACACGCGGTG CgCGCTGCGC   10200

TCAGTTCTTC CTAAGGGGTG GGCAGGGTGC ATTGCTTGTT TTTTTTGACT GCTGACAGTA   10260

CAGTTGCACC CTTGTGAAAA GTTCGTGCGT ATATTGGCGG ATCGGGGTTC TCGTTTGTAT   10320
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TCTGTGTGGA GTGGGGAGCT GTGGCGgTCG TGCGCGCGTG CgcGAGTATT CGCGTGCGGA    10380

gcTTGTTATC GGTACGCTCT GTCGCGTGCG CGTGTACTCT AAGCGACCTG CTGCTGAAGT    10440

GCACGCGGCG CTTGAGGAGG TGTTCACGCT GCTACAACAA CAGGAGATGG TGCTGAGTGC    10500

TAACCGTGAT GACTCTGCGC TTGCTGCCCT AAACGCTCAG GCAGGTTCGG CACCGGTTGT    10560

TGTTGACAGG TCGCTGTATG CGTTGCTTGA GCGTGCGCTT TTTTTTGCAG AAAAGAGTGG    10620

GGGTGCGTTT AACCCCGCAC TAGGTGCGgT AGTCAAGCTT TGGAATATTG GCTTTGACCG    10680

TGCTGCTGTC CCTGACCCCG ACGCGCTCAA GGAGGCGCTG ACACGTTGTG ATTTTCGTCA    10740

GGTGCACCTG CGCGCTGGGG TATCGGTGGG CGCGCCACAC ACGGTACAGT TGGCACAAGC    10800

GGGCATGCAG TTGGATTTGG GCGCCATTGC TAAAGGATTC CTTGCGGACA AGATTGTACA    10860

ACTGCTCACT GCGCATGCTT TGGATTCAGC GCTCGTTGAT CTGGGAGGAA ATATTTTTGC    10920

CCTTGGTCTT.AAGTATGGAG ATGTGCGCTC AGCAGCcGCG CAGCGGTTGG AATGGAACGT    10980

GGGTATTCGC GATCCGCACG GCACGGGGCA GAAGCCTGCA CTGGTGGTGT CGGTGCGCGA    11040

TTGCTCGGTG GTGACTTCTG GTGCGTACGA GCGTTTCTTT GAGCGTGACG GGGTACGCTA    11100

CCATCATATC ATCGATCCGG TTACCGGGTT TCCGGCACAC ACTGATGTGG ATTCTGTGTC    11160

TATCTTTGCA CCCCGTTCCA CAGATGCAGA TGCGCTTGCT ACCGCCTGTT TTGTATTGGG    11220

GTATGAGAAA AGCTGTGCGC TCTTGCGTGA ATTTCCCGGT GTTGACGCGC TGTTTATTTT    11280

TCCTGAcaaG cgcGTGCGCG CAAGTGCaGG GATTGTCGAT CGCGTGCGTG TGCTCGATGC    11340

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GGACTGTCCT CATCATGGTG TGTGTGCAGG ATGCGTGCGC GGGGGTTCGG TCAGATGTCA    11460

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ACGTCCCTTA TCCTGATTGG AGGTGAAATT AGCACGCGGG CGCATATTAA TCTTACCCAA    11760

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CACGGTGCAG GACTGAAGGA GTTTGCAGGA TCGCAGGGGG CAGGGGATCA GGGGATTATG    11940

TTTGGTTTTG CGTGCCGCGA DACGCCGGAG TTTATGCCCG CCCCCCTCAT GTGCGCGCAC    12000

GCGgTTGTGC GCTATGCTGC CACGCTTCGT CATGAACGCC GTGTGCCGTG GCTGCGTCCT    12060
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GATGCAAAAA GTCAGGTTAC CGTACAATAC GAGGGACATC GACCGGTACG TATCAGTGCG 12120

GTTGTGTTTT CTCAGCAGCA TGATCCGTCA CCTTCATACG AAACCATTAG AGAAACGCTC 12180

ATAGAGGAGA TAGTGCGTCC GGCGCTTGCA CCTACAGGTC TGTTAGATGA AAACACGCGT 12240

TTTTTTATCA ATCCAACCGG TCGTTTTGTC ATTGGCGGTC CCTTTGGGGA CACTGGTTTG 12300

ACCGGGAGAA AGATCATCGT AGACACGTAT GGGGGAATGG GCCGCCATGG AGGAGGCTCC 12360

TTTTCAGGTA AGGATGCATC TAAGGTAGAT CGTTCTGCAG CGTATATGGC GCGTTATATT 12420

GCAAAAAATA TTGTGGCAGC CGACCTTGCT GAGCGCTGTG AGGTGCAGCT TGCATACGCA 12480

ATCGGCGTAC CATATCCGGT TTCGCTGCGG ATAGAAACAT TTGGAACGGC GCGCGCATCT 12540

GAGTCACACA TCACACACGC GGTGAAAGAG ATTTTTGATT TAACCCCAGC GGGTATCGTG 12600

CGCACGTTGG ACCTGTGTGC GCCTCGGTAC CGCTCGACTG CAGTGTATGG TCACTTTGGG 12660

CGCGAACAGT TTCCTTGGGA ACGCACAGAc TGCGTGTGCG ACTTACAGCG TGCGGTGCGC 12720

CCGTTCGCGC TCTCTGGCCA GATAAAGAG TAGCTTCGTT TCTTTTTTGT CTGCGCGGGG 12780

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GGGGTCATCG TAGTGCGTGT GCAAAAAGTG ATAGATGGTG TCTTCTGCAT TGTTTTTGcG 12960

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AACAATGTGT GCGATGGATT CGACCGTCTC TTCCGGTGGG GAAGATCGCT CTACGGTTGC 13140

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TGTTCCTGTG CGTGATGCAC GGGAACTGCA CGTGCGGACG TTCTTTGTGT TGTGACGGAA 13260

AACCCTTTCC ATTCCCGCTG TTTCATCTTT CTGTTTTGAT TCCCCACTAT CTTTTTTACT 13320

AATTTTCTCC GAAGGAAGGG CAGGTAACTC TTTCTTACGC GCACGAGTCC gTGCACGCGT 13380

GCCCGCCGTC TTGCGCGCAT GCGGAGTAGA AGATCGTCTG TGAGTCGCAG GCACTTTTTT 13440

ACCCTTTTGA TGATGaTgCT CCGCACGTTC TACCAGGCGC GCTTTTAACC AGTGCCAGTT 13500

TCGTTGCAAA TACAGATCAC CACTGATGCT GTAGTAATAC CCTGAGGCGA CGTGCGCGAG 13560

CACCAAGTGC AAAATATCTT CGTCTTTCCA TTGGTGACTC CGTCCAGTTT TAATTGAATG 13620

AAAGATATTG TAGTGATGTG TTTTATACTT TCTGCTGTAC AGTAGCACGG TGTTCTCAAA 13680

GGCTCGATCA TCGTATCTGT GCCAGTATTT GATTGCATAC GCAAGTACCC GATCTTCAAT 13740

TTTTGTAATA GTTTTCGCGA TTTCAATGGT GCGTACCTGT TCTGCGGTGA ACACCAGTTG 13800

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TGAAAAATCT ATCGTTGAAG AGGTATCTGT ACCGTGAGCC TCTGTGCAAA AGCCGTAGtT    13860

GCGCGCGTGT GTGACTCCTG CCTAAATGTT CGCACAGAAG AAAGCGTGTC GGTAACGTAC    13920

ATGCGAATGA TGTCTGCAGC CTTTTCCATC TCTTTCTCTC GGTAGAGCAG CCATTGTGCA    13980

TAATGCGTGT GCTTTCTGGA GAAATGAACG GACTCAAAGC GGTTGAGAGA AATAGAACGC    14040

ACAATCTTTT CGCAAACTCG GATCAGCGTG CGCACGTCGG TCAGGTCGAG GGGCGCAACC    14100

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GCTAGGGCAT CGGCAAGCAC TTCCTTAAAC CGCACGTCCC TTTTGCGATA ATAGGACATG    14220

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AGTGCCTGTC TTTGATCTCC AAGGGATCTT AGTTCAAAAT ACCGGTCGAT GTCGGCATCT    14340

TCGCTAAAAC TCAGCTGGGG AAACTCCGCC CTCAGTACTT TTTTATCAAG CTCTGTGAGT    14400

GTGCGCATGA CATCCCAGGT GCGTAGACAA GCTCTTTAGA AGAAAGGCTG GCGCGCAcGG    14460

GCCTTTtCGA AGCGGTGAGA AGAACTAACG CAAGAGGCTT AGAACGCTCT GcGTAgCCTG    14520

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TACCATCTCT TTTGCCATAT CCACGTCGCG GATGCGAGAC TCAGCTGCCT GCAAGTTCTC    14640

TGCCGCGACA TTGATACCGG CAACCGTGTG GTCAAGTCTA TTCTGGTAGG CACCGAGATC    14700

AGCGCGCTGC TTATTAATTC TCTTTATTGC CTGATCAAGC GTACCGATTG CGCGGTTGGC    14760

CTTTTCAGGA GAATCGATAT TCATGACCGA CTCGTCACCT GCATCCCGAA TTCCCATGGC    14820

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GAACCACATG GATGCAGTTA CAGTGTTCTC CCCGCCTTGA CGCGCGAAGC GACCAGTGAG    14940

CATGTTCATG CCATTGAACT GAGCGTGGCT GGCAATGCGA TCCACCTCTG CTACCAACTG    15000

AGAGACCTCT ACCTGAATGT AGAGACGGTC TTCTGCGGAG TAGATACCGT TCGCCGCCTG    15060

CACACTCAGT TCGCGAATGC GCTGGATAAC GTCGGTGGTC TCCTGTAAAA ACGCCTCCGC    15120

AACCTGAATG AAGGAGATGC CGTTCTGCGC GTTTGTAGAC GCCTGGTTCA AACCACGGAT    15180

CTGGTCCGCA TCTTTTCAGA AACTGCAAGA CCCGAAGCGT CATCCCCTGA CCGGTTGATG    15240

CGCAGTCCTG AAGACAACTT CTCAATGTTC TTCTGGACGG ACAAGTTAGT GTGTCCGAGC    15300

GTTCTTTGAG AGAACATAGC GCTCATGTTG TGATTGATGA TCATGAAGCA TTACTCCTTT    15360

TGGTGCTTTC AAGCGGACCA GCCGCCCTGG CATCCCTGCC gTTGCACCCC GTGCTTGGTA    15420

AGGGGTATCG GAATACGCCG GGTGCACTTG AGGAAAAAGC GGTGCGTATA TCTTGCGTAC    15480

GTGAGTGCTT GAACGTTGTG CAAATCGGAG GTAGAATCCC CGTCCTGTTG ACCTCTGCAG    15540
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CAGAGTTACC CCGGTTAGGT TCGTGCGTGA GATAGGTTGC CGGTTGCGTC CGGCTGTGTG   15600

TGCACTGTGG ATTGAGTGGC TCTGTCCTTG TTTGAGCTTG TGCGCGGCGT AGCTGTACTT   15660

GGCGTGCACT GCCGTCTTAG CTTTCCACGG AGGGATGTGG GAGAAGATAA TTAGGGAATG   15720

TGGGGAAGGC GTATGAGGTG TATGAAGATA CCCAGGCAAC TGACGAGGCG TCGGCTACTT   15780

GAGAGGTTTT ACGCGCACCC GTGGGTGCTT GTTGCGGTGC TTAGCgcGCt GACGCTCTTT   15840

TTTGCAGTCC aGcTACGCAC GCTACGCTTG GACAATAATA ATTTTCGCTT TATCCCCAAG   15900

GAAAACTCGG TGCGTATCGC CGATCAGCGC ATCGATAGCA CATTCGGCTC CCAAGTTCCT   15960

GTGCTCATTG GTATTAAGCG TGAGTATACT TCCGTCGTTG ATCCTGTCTT TCTTGCGGAC   16020

GTGCGGTCGC TTATTGAACG CATCAGTGCG GTCCCCTTGG TGAGGGCGGA GAGTACTCTC   16080

TCACTCCTGT CTGCCGAATA CCTTGGTCTG CGTGCAGGAA ATATTATCAG TGAGCGTGTT   16140

GTTCCTGATG AGTTCTCCGG AAGTGCAGAA GAGGTACAGG GCGTTTATCG AAAACTTCGA   16200

GATTGGGATT TCTATGAATG TAGTCTAGTC TCGCGCGATC TACGCTCTAT GCAGATAGTC   16260

GTGTTTCTAG ACACCTCCAA CGAAGAAAGT AGTTCACCTG AAGCGATGGC AGCTTGTCGC   16320

GCGATCATAC GCATTCTCGG TGCGTGGAAA AGTCGTGACG CTCAGACTTT TGTCACAGGG   16380

GTGACTGTTT TTAACGAAAT GGGGAATGAG GCGTCGACGC ACGATTTAAC GCTCCTGGTG   16440

CCGCTTGTGG TGCTCATAAT AATCGTGGCG TTGTTTGTAT CGTTTCGCCG CCTGGCGGkT   16500

ATCTTCTTGC CCCTTTTGAC AGTGGTCATA TCTACCGTGT GGGCCTTAGG AGCTATGGCT   16560

TTGTGTGCCA TACCACTTTC TATCCTTTCT GCCATCTTGC CTGTAATTCT TATTGCCGTC   16620

GGGAGCGCAT ACGGCATTCA TATAGTTAGT GCGTATTTTT ACGGCGCCTC CTCGCGTATC   16680

TGCTCCACCC GGCAGGAGCA TCGCGCTCGC   16710

(2) INFORMATION FOR SEQ ID NO: 46:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1235 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 46:

TCAGCCCGCG CACAGGAAAG TATAnGATCG GCACGTTTCC TTGCCTCCGC ATATATATCT   60

CTTTCTAACA CcTCTGTTGA ACGCAGCTCT TCCATGTAGT CTATACCTTT GCCCCGATAA   120

CCTGTCGAAT TGATTCACGC AGGGACGTGC GTACGTTCCC CTGTTCGTGC AAAGCGGGGA   180

CTTCTACGAC AAAGGGTAAC TCCCCCTGCA TCTGCCACGC ACGCACCTCC TCTCTCAGGT   240

AAGACATAGC GCGCTGGGTG AGTATGAGGA CCTGCGCGGG ACGGTCTCCA GAGGGGGGAC   300

GCGTGACCTG GGAGAATGCG CGCGCCGCCT CCTCTGGAGA ATGTACCACG AAACCGTGCA   360

CCCCTACTAA GGAAAAACCC AACACCAGTT CTTGCTCTCC AATTATGCAA TACGTCACTT   420

GATGACACCC CAGACGCACG TCAAAGCAAG ATGATAAGCA ATGCGACCAA AAAACCCCAC   480

AGACAAATGC CTTCTGCAAG ACCGATAAAG GGAAgTGCCT TTCCTGAAAT TTCAGGATCC   540

TcAyTCATTG CCCCCATCGC TGCAGCCCCG ATTTTACCTA CTGCAAGGCC TCCCCCAACG   600

CAAGCGAGCC CCACCGCGAG TcTGCGGCAA TGTATTTTAA GCCGCCATCT ACATGAGAGG   660

GCGGCTGmmT CTCCGCGtTa AGaAGACACG CACAAGCCAG CAAACnCACC CGTAAACCAT   720

GCTCTTTTCC AACCCATACT AATCCTCTTG ATATCCAAAC CTAAnCGGTG CGAAGACGCT   780

CCCACTTTTG GTAAAAAACT TTGAAAAAAA CTCGTAGTAT TGCAGCCGAA CCGCTTGAAt   840

GGCAACGATC AACCCTTCTA GAAAGATAAT GACTCCATTC CCAAACACGT ACACGAGTAT   900

GCCCCATAGT GAAGCGTAGC aCCAACGAAT TGCGTCATAG TAAACACCAC AAAACTTAGT   960

ACCGCATGGG ACAAGGCAAA GGCTCCCACG CGCAAAAAAC TCATGGAGTT GGAGAAAAAT   1020

CCCGACACCA CATCGACCAT TTCGATAACA CCGTGCATTA GATACATGCC AACACCTTCA   1080

GGAAACCACG GACGCACACG CTTGCACACA CGCTCCAAAA ACTCTTGACA AAAAtACCCA   1140

CGaGAGGCAC GCCCTTGCAA CCGCATCAAA GACCCCGAAT GGATTCCAAA AGTGGTATGC   1200

GCACTGCAAG GGCAACATGT ACCAAAAAAA GAGGG   1235

(2) INFORMATION FOR SEQ ID NO: 47:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 16636 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 47:

ATTCTCnGCA CATGTnCCCT GACACTTCCG TAGCGGCTGC CGAGACCTGC AGCCAGAATA   60

ACTAGCGTGA CGTATTCGCT CATAGAAGTC TTCTAGCAAA ACGGAGCACG CCCCCGGgCC   120

ATCCCCGGGA AAGCGTAAGA GACGCACGGT GCACTTATGA GCGCGCACGC AAGGCCGCCA   180

TCGTAACGTA TTGTACGGCT TGTTAAAATG CGGCAGAAAG AACATGTCCA GCAGTTTTAA   240

CTTATCAATG GTCACCCGCT CCTGGATTGC AAGAGAGAAC AGGTGAATAC CCATCGACAT   300

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GTCGTGCCGT  GACGCCATTT  GAGCGCCCAC  AATCACCCGC  GTTTTTTTAT  CAAACACAAT   360

CCGGATTTTC  ACCGGGTGAT  TGTCCACTTC  CATAAAGGCG  GGTAACTGTG  AGTCTTCAAA   420

ATCCGTTACC  TCCACCTCAA  GTCCCATGCG  CGCGGCGGCT  nCCTGCGTCA  CTCCTGTGGA   480

CACCATTTTT  AAGTCGTATA  TGTTGATACC  GTTGGAGCCC  TGCACCCCAA  TGCCTTCAAG   540

TGGGAATCCT  GCAGCGTTGT  GCGCCGCAAC  GATACCGCTG  CGCATCGCAT  TGGTTGCAAG   600

CGCAATGTAA  GAAGTTTGTC  CGAGCGAATT  GTCAAACACC  GTTGCACAAT  CGCCAATTGC   660

GTACACGTCT  TTCACACTTG  TTTCTTGTTT  TAAATCTACC  gCATACGCGC  CATTGGCAAA   720

GGTTCGCACC  TCGTTCTTTC  CCAGTGCAGT  ATTGGGGCTA  AAGCCAATGC  ACACCATAAC   780

CATGTCTGCG  GGGTACTCAC  CCTTATCTGT  CACCACTGsC  ACTACCTTTC  CATTGCTGCC   840

ACGGAGTTTT  TGCACTTTCT  GGCCAAACGC  AAGGGTGATG  TGATGGTGCG  CAAGTTCTCA   900

TCCATGAGTG  CACGGAAGGA  TGCGTCGTAA  TAATTGGAAA  GACTAGAGTC  CATCGCATCG   960

ATGAGCGTTA  CCTTTTTTTG  GTGGCGCTCA  AACGCCTCTG  CAAGCTCCAC  GCCAATGTAC  1020

CCGGCACCGA  TAACGGCAAT  ATTCTTAATG  GAAGGCTGCT  CGAGTTTTTT  AATCACCGCT  1080

TCAGCATCCT  GAAATAGCTT  AATGCGCTGA  ACATTCTCCA  AATCCATGCC  GTCGATTTTA  1140

GGAATGATAG  GCAGAGAACC  GGTTGCAATA  ATAAGCTTGT  CGTAGGACTC  TGCGATTGCA  1200

GAACCGTCTC  GTGCAGTCCC  GTACACCTTT  TTTGAGGCAA  AATCGATACG  GGTGATATCG  1260

CTTTCCATGG  AAACGCGTGC  ACCCTTTTTT  TCCAATTGTT  CTTTATTTGC  GTAGAATAGA  1320

CCCTCCGATC  CACGGATTTG  TCCGCCAATC  CAAAGAGCCA  TGCCGCAACC  AAGGAAGCTA  1380

ATATTATTGT  TACGGTCAAA  GACTACCACT  TCATTCGTGG  TGGTAAGGTC  TGTGAGGCAA  1440

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GGTTGTTTTG  TTCCCAAACG  CGATAACTGG  GAGAATGTTA  TTcTGCGGTG  CAGGTGGTTT  1620

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TGcACGGGGA  AAATCACCAA  GTTGAGCAGC  AACGAGTGCA  ATCAGCGTAT  ACACATGCGC  1860

AGTAAGTTGT  ATATCTAACG  CCTTCACCAG  TAAGGCGTCC  GCTTCATGGA  GTAAATGCAG  1920

TTTGATGCTG  TTTTCTGCTT  TGTGCACGAG  CATCTGCACG  TTCTGCGGcT  CCTCCCGGAG  1980

CGCTTTGTCG  TACCACGGCG  CTGCGTGTTC  ATAGCATCCG  TCGGCGTAAA  AGGCGTTGGC  2040
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AAGAAGATGA AAAGCCTGAC CACGTTGCGC AATCACCGCC gCGTCTGCGC GCTGCGTTTC   2100

CACTTCAAAC AGGGGAACAC AGCaCGCTAG CGCACCGCgc TGGnCGCTGT AGTTCTATAT   2160

AATTTTCCAA CACTACGAGT TCGTGCGGTA ACAGCGCACG CGCGCGTTGT AAAGACTGCG   2220

CTGCAGCGTc GAAGTTTTGC TCGCGCAGAG CCTTTTGCGC ACACAGGTTA TGCAGCCAGC   2280

CGTTATCCGG ATCGAGTGCC AGGGCGCGCG CAAGAGGCTC GTCACAATCT TTTTCGCTTA   2340

AAAAAAGAGA TTCAGCGTAT TTAAAGTGGT AGAGCGCACA GTCCGGCGCA AGTGCACAGG   2400

CTCTTTGAAA TGCATCACGT GCGCGCTGTT CGCACGCTGC TGCAGCAGGA GCGTCGTGTT   2460

CGTGCGTGCC CTGCGCTTCT CTCAAAAGCA GGCCATATAA GTACCAGACG GTAGCATCAG   2520

CGCTCCtGCG CGGCAGAGTG CGTCAAAcTG CGTGTGTGCC TGACGGTGCC GTCCTGTTGC   2580

ATAATACAAT TTGCCTGCGA TACTGCGAAC TTCTGTACGC TCAGGATCAA GACGGCGAAG   2640

TGCGAGTACC ACGCGTTCTA AATCAGCGTA GGATTCCTGT GCTAAAAAAA GCCGCGCCGC   2700

ATGTAAATAC GCCTGAATTG CTTGCTCCTT TTCCCCCAGT AGGGAAAGCT CCTGCGCCGC   2760

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TTGTTGGTAC AGCGCACCTC CTAAGGCGAG AAGTGCCCGC ATACAGTGAG GGTCTTGCAC   3000

AAGCGCTGCG TTAAACGCTT CTTCTGCCTC ATCATAGAGG TGCTGGGCAC ACGCGATGTC   3060

TCCTGCAAGA AGATACTCGC GTAAACCAAA GGTACATTTG GCTTTTAGTT TTTTCATCTC   3120

TGcACGAGCG CaCrCTGCGc GTcCCATAGC GTACAGGGAT TCTGCGAGAC GCAGgTGCGC   3180

GCTTGCAGGG ATACGCGCAG gTTCGTTGGC GCGCAAGCAT GCAGTTTCAA CCATGAAAGG   3240

TTGCGATTCC AGACTGAATG CTGAAAGTTC AAAAGAACGA TGCGCATGGA CACCCCAGTT   3300

CTGGGCAGCA AAACAAACTT TCCCTGCCGC TTGTATCGTG TCATCTTCAA TTTGCGCAAT   3360

CCACTGATCA TCTACACAAA GAGTAAAGCT TGTGCCAACT GCAATGAGGC TCAACACGCG   3420

CACTTCATCG ctGGCGCCAG TGTCAGTCCA TCCGAGCAGG GGGAGGGGGG TGTTGTTGAC   3480

TACCGCGTCC AGACGCAGCC ATCCACCGTC TGAAACAAGA AGCGCGTAAA AGGTGCTCTC   3540

ATTCAGATAA CGAAACAAGA GCCcTGCGGC GCAGGTACCT GCTCGCTCGG GCACCGCCTC   3600

GCCCATTGCG CTCGGGTCGA CGGCAACTGC CTCCGGAAGA CAGGCAGGCC GAGAGGTCGA   3660

ATCAAGAGAA GCAGGTACTT CTGGCTGTTC TGAATTAGGC AGCGCACGCG CCTCGCCTGG   3720

AGGGTGAGTA CCCGGGAGAA AGCGGATGCG CGCAGTAAGC ACGCAGTCCT TATAACGAAA   3780
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GACGGGGTTA GCACTCCACG CATAGAGGAA CTTACGTCTG AGGTGGAGCG TTAACCCATG   3840

CGCGCCACGT GCAGTCTCAT AGCCGTCCCC TGCCTCCGCG TGCCAGCGTG CATGTTCCGT   3900

AGAAGAAAAG TCAGCGCGCC AAAACTCAGA CACAATTTCT TCATAATCTA CAGGAGGTGT   3960

TACACGCCTT TTCAAGAACT TTGCTTTGAA ATATTGAAAA TACAGGCGCG CACGTCCCAC   4020

GCCCAAACTC TACGCTAATT TTCCCCAAAG TAAAAGGGGA AGGGTGAGTC ACAAGACAGC   4080

ACACAGGTGA TCACAGGGAG TGCGCGTCTC CGGTTAGGGA AATAAGAAAT GTGGTATGCT   4140

CCGCCTGTAC GTTTGGACTA TGGTGCAGAG GATAGGAAAA GATGCAACTG TACACTCCTG   4200

CGCCTATCTG GTACCCTCTG GcATAGTTTT TACCTAAGGA GCATTTCAAT GGCATTACTT   4260

GACATAAGTA GCGGGAACGT CCGCAAGACT ATCGAGACCA ACCCTCTGGT CATTGTGGAC   4320

TTCTGGGCTC CCTGGTGCGG TTCGTGCAAA ATGCTCGGTC CTGTTCTGGA GGAGGTAGAA   4380

AGCGAAGTCG GCAGCGGTGT TGTTATTGGA AAACTGAATG TCGATGACGA CCAAGATCTC   4440

GCCGTTGAGT TCAATGTGGC GAGCATCCCC ACGCTTATTG TTTTTAAAGA CGGGAAAGAA   4500

GTCGATCGTT CCATAGGCTT CGTTGATAAG TCAAAAATTC TCACGCTCAT CCAGAAGAAC   4560

GCCTAAGGAT ATTTCTTTCG TACGGAGTGT GCTACCAGCT CATCAGCAAA GCGATGCAGC   4620

CGGTGCCTAG GGGAACAGTT ATATTGTCGT AGTCTTTGCA GGGGAGCAGT TCGATGAGCG   4680

CCGCGCAGAC TCCGAGCCCC CAGCtGCGCG CGCCGGAGnT CCCAGCGCGT GCACACTCAG   4740

TGCCGTTGCT ATGCAGCACA CGGCACTGCC TACGGGTGTT TTCCCCTGCA CGGAAAAGAG   4800

CGTCGTGGTC CTTCCCCTTC TGCGTCCGGG GGAATCAGCG GAATTTTTGA AGCGCAAGAA   4860

AGTGTATACA GTACCGGCGA GGCTTGCGCA TCCGTCTCCG AAAGCGAGGG CGCAAATGGC   4920

GGCTGCTGCG ATAGGTGGGG GAAAGAGAAG GATCGCGCTT GAAACACCGA TTGCAAGGGT   4980

GAGTGGCCCT CGCACAAGAG AACGTTCGTG TTTGTCCCGG TCTCGGGCCG CCGCTCGGGT   5040

GAGGAGTGAG ACAAGTGGCA ATGTTTTTCC ACGCAgTCTC CACCGCTCGG CAACATAATA   5100

GCCAACGCCG AGCGTGCCAA TGGCGCCGAG CGTAAGGGGT TTGCTCCATG CCGCAAGCAC   5160

AATGCTCAGT GCTGACGACA GGTGTATGCC CTTTCTGAGG CATTCGCTTG CAAGGCGTGC   5220

GTGCATGCTT TCTACGTGAG CGGCGCGGCG AGTACGTGCG GCTGGGTTAG CGCCGGCCTG   5280

TACGGCCCCG ATCCTGGCTG GATGCTCGCC CCGCCGGCAG GGGGCGGCTG TCTGCAAGnT   5340

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ACGCGCGCTA CATTGAAAAA TACGAAGAGA CTGGTAGTAT CTACGATTGT GGTGATCAGC   5460

GGTCCTGCCA TGATGGCGGG GTCTAAGCAG AGCTTTTTAG CAAGAATAGG AAGGAGCCCT   5520
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CGATATCAAA CTTTTTTGCA ATTTCAACAA TTTTTTCTGC AATGGCGCCC GTGCCCGAAG   10740
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GGCGATCTCT CCTGAGGAGA GAACGTAGTT CCCGATGCAA AtTCGTCGTC GACATACTCG    12480
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CAGGACCCAT TGGTGCCGTG TGCAGCGGTG CAAAAATTAC TCGATGCGCG TGTGCGCACG   16620

CACACCAGTA CGTATG                                                  16636
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(2) INFORMATION FOR SEQ ID NO: 48:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 13330 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 48:

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ACCACATAGC GCAGTAACGC TGCGAATCAA CGGAGCGAGG AGCGTACCAT GAGCGAAAAA     180

CTCCCCCGTC AGAAAACCCA TCACCATGCT AGAGAAAcCT ACGGACAAGA ACACGTAGTC     240

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TATACGATAG GTATGCCGGG TAGACTCAAG CGCATCACGC GTGcGGTGcA CACGTTCCTG     660
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TGCTCTGCGC ACAGTGGGAA GAACTGCCAC GCGCCGCGGC GGAAAgACGC AAATGGACAA     1020

GCGCCGTCTT TCCCAGGTAC TCCAGTACTC GGTCCACATC CCGTTCAAGC ACTACAAGTT     1080

CGAGGAACTT CATCCTCTGC GATCTAAACA TAAGCTGCTT CCCCCAAGAA CTCACGTGGC     1140

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GGAAAAAAGC GAAGGGGGTT CCTGATAGCA CGATGCCGCA CGCACACAAT CGCGCAGCAG     1920

ACACGCCTCC ACCCGCCGCT GGATCAGACC TACCAGATGT GCACCAGCAG ACCTAGGGGC     1980

AGGCTCAGAA AAAAGGCGCA CCCAGAGATC ACACAGCGTC CCCACACCCT GCAGGGTACC     2040

CAGGCGCTCA CCAACCCAAA GCCGAGCACA CAAACCGGAT AGTTTCGCAT AGACGAACAC     2100

ATCCGCGACA TCTCGCTCCA CAGCCACACA CTACCCAAAA AAGAAACCAT CAAGGAAGGC     2160

TTCGAAGCGC TCCACGTCCT CCTCCAGCAC AGAAAGCTCG CGTTCTAACT GTCCACACGC     2220

CTCCCTTCTC TGAGCGTCTA TCCGCGCACA GGCCTCATGC CACGCCTGCT CCTGCGCCTC     2280

AACCACGCTC CCCTCCGCTT CCTTCACCAA GGTCTCCCCT GCCGCCTCTG CAGATTCGCG     2340

CAtCCtGCGC CTGCTCttGC GCCTTCTCCA CGAGGACAGC GGCCGCATCC TCCACCTCCG     2400
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GkTGCTTCCA CCCACTCCACa GCcGTCTCGG CTTGCTTcTg TGCGCCGCTT TCTGCAAGCC    2640

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GCCTCATGCT ACACCAAAGC GTGCGCAAAA ACAAGGACTT CAACCTTTCA CTCCCTGTCC    2940

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CCGCATCCGT CGCCTCTGCT ATCAACTGCG CAAsACCCGT GTACCGTGTG CAAAGGCATC    4140
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CACATCGTCC ACCGcAACCG GcTGCGCATC CGCACAGAAC GTGGaCGcAC ATaCGTGaTC    4320

GACCGGCAAT aCCACCGaCA CACCACCGcT TTGaGCCTTT TGCAACAGCA TaCGTGcaGT    4380

GTCGATAAAG TCATCCTCCA CTAGGGAGGT ACCTACACCC ACACCTTGCG CTTTCAAAAA    4440

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CGATTCCTCA GGGATTGGCG TTCTCATCTA TCTGTGTTCG ACAGTGAAAA AGTTAAAAAT    5880
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TTTGGATTTC TATTACGTCG TACGTGCTAA AGCCATGCTC ATCTGCAAAA TTGCCAGGAA    12840
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GGAAATGGCA   13330

(2) INFORMATION FOR SEQ ID NO: 49:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 10214 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 49:

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ACAGAGCGGC ATGAAAGCAG GCGCATTGAT AACCAACTTC GGGGGCGTTC GGGGCGTCAA   120

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GGGGGGGAGC GGCTGAAGCG TTTTATGAGC CGTGTGGGTA TGGAACCAGG AGAACCTATC   240

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GCGCATTTAA AAAAGAATAT TGAATCAAAG TATCTGCTTG CAGGGGCGCA GAACATGGAT   660

ACGTTCATCC GCTACCAGTA TGTGCAGGCG ATCGATAAAA AATGGCTGGA CCATTTGGAA   720

CTTCTTGAAA TCCTCCGGGA ATCGGTGTAC TTGCGTTCAT ATGGGCAAAA GAACCCGCTT   780

ACCGAATACA AGCTTGAAGG GTTCGACCTA TTTTACACCA TGTTAGACGA CATTCGCCTT   840

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CCACCACACt TGCACAGGCG GCACACGAAT TTCAAGCACT GGGGCAGCCT GGCAGAGGGC      960

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GCCCcTGTGG AAGTGGCAAA AAGTACAAAC ACTGTTGTGG CCGCTGAAGA GCAATCTCAT     1080

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CCTGACCGCA TACACCTATG CTCTTTCAGA AAAGGTATCT ACAGAGGACG TATCGCGTGC     2520

TTGCGAAAAG CTGTTGCAGC CCATCCGCAT GCTGCGCGGG TTGCACAGAT CAAGCAAACC     2580
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ATAAAGAAAC TACTTACCGA GAGAGGcATA TGAACGAGGT CGATGCAGTA AAAAAGGGAT    2640

AGACAGTGcA AATCCTGCAG CAAGTTGCTC AGGGGATCGC GTCTCATTTC GGGCATGACT    2700

GTGAGGTGGC TGTGTACGGC GTCAGTAGCG ATGGTAAAAA CTGCGCGGTT GATTTTATCA    2760

CAAATGGACG CGTTACCAGT AGCAGGGTTG GAGACAGACC CCGCCTGTCG CTCTTCAAGA    2820

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AGCGATAAAC TTTGATATTA CTGCTTTGTA GGTTACGCAt TTGCGCTTGG CCGGCTCACC    3000

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GACCTGATAG AAGAGTCTGT AGAAAGAGTA GGAAAACCTG CAGCGCTCAT GAGTAAAAAG    3120

GAAAAAACGG ATGCCATCCA CTTTCTCAGC CAGATAGGGG CGTTTCTCAT TACACGCGCG    3180

GAAGACAGGG TCTCCCACTA CTTCGGCATT TCAAAGTACA CCCCTACAGT TATATCGAAA    3240

CTGGCAAATC GTGATCGCAC CGGACTGAGT CCCCAGCAGA GGGATCGCCG GGCCCTACTC    3300

CTTCCCTGGT TCAAGCTCCT CGGcGAAGAC AACTCCTCCG GAGCGGACCG CTCGCACCAC    3360

GCTCCCACCC GTCCTGAAAT ACTCGGACAC CACCGGTGAG GTCGCCGCGC GGAAAGATTC    3420

AACTATTCTT TGTCCCACTT CGTCCCCGTT CCGCGGGATC CGCCGCACCC AATATAACGC    3480

AGCGTTACGC GGGTCTTTGG TAAGCGCGTG CACCTCCCCA TCCACTAGCA GCCTTTTAGG    3540

CACCCCCTGC ACAAAATCTA CTGTCACGTG CCTACCTGTC ACCGGGTGCA ACCACTCAGT    3600

ACGCGCATGA CCGGTAGGTA GTTCTGTGTG CGAAATCGTC ACACGTCCAC GGCCATACCA    3660

TTTTTGCACC TTCTGTCCCT TCGCTCCATA CTCTTCTTGA TAGGCAAAAC TTCGATCCTT    3720

GTGCACGTCA ACTGACAACG CACGTACCGC CCCTTGAGCA TTGTAGTATT CCCGCGTTTC    3780

AAAAAATCCA TCATCATCCC GATCGCTATC CCGTtCGCGT TGCGCGTCCA TCCACATAGT    3840

GCGTACGCGC ACGAAAACGC GATCCAACAT GAGTTTCAGA AAATAAAGGC AGCCCTTCAT    3900

CAAGGTACGT CCtTACGCGG GCACGCTCAA ACAGGGAATC AGGCTTTTCG TAATAAAGGG    3960

AAGAAACTGT GATCTGCTGC TCAGTAGGGA GCGGCTCATT TGTCAATACC ATTGTGAAAA    4020

AATCGTGCGA CCGCACACCT TCTAAATCTC GCGCAAGATC TAAGGACTGC ATGCGTACCG    4080

GCTGCCACCG AAGTGCACGA GGACGCAATA CGTACGTTTT ATCCTCCCAC CCCACCTGGT    4140

GTACTTCAGG GTAGCGATCG TAACACACTC TGTAGCCTTG CTGCGTCAAA GGAACACGCG    4200

CCTGAGTTTC TCCCTCCACC CCATTATCTG CAGGAAGCGA CACGCGCGGG GCAATCCAGC    4260

GCTCAGCAGC ACGCTCATGG TCGTGCGCGG CAATATTCTG GGGTATGGGG AACACAGAAG    4320
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CGCGCGACAA TTCCGTCTTT TGCGTACTGT GCATCGTGTG CACGCACGTT GGCGCACCGT   4380

CATTCGCATA GACTTCATAC TCGAGGATGC CATCCTGGTT TGTATCGAAC TGTGCCCGGC   4440

TCGGCCTTCC TGCTTTAAAA AACACACGCG CAGAAACAAT GCCGTCCCGA TTTTCATCGG   4500

TATACAACAC ACCTTCGAAC TCCGCAAGAA ACCGCGCAAA ACGTGCGCGA ATCGGCCGAC   4560

TTGCAAGCAA ACGACTGAAC TCATGCAGCA GATCCGCATA CAAAACCACC ACGCGCTGCA   4620

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GGTCAACCGC AGGAACTGCC AGAGGGGAAT TCAGCGTACA GAACATCTCC ATCGCGCGTT   4740

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CCTGCTCAGG AGCaGAATCC CCTGCGCGCG TGCTTTGCTC ATATGAGGAT TGAGCAGAAC   4860

TCTCTCCAGG AGCATCTAAC GGACGCAAGG TAAAATACGT TTGCAGATAT CGAAATGCCA   4920

TGTTCGTTCG AGGTTCAAAT AGAGCCGCCT CTACAAGCAG CGATGGGTCC TGCTCCTGCC   4980

ATACAGAAAG ACGTGACAGG ATGGAATCTG CTATCTTTTT TGACCGCGAC GAGGGACGTC   5040

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GGCGTGCTGC AACGTATCCA CACACAGACG AGCATAAAAA AGCCGCACCT CTTCTATATC   5280

GTACACACAC CATTGCATAT CCTTTGCCAC GGCACGGGCC ATCCACTGTA ACGCACGTGC   5340

GCGCGGCTGC TGCAGCGCGT AAGAAGCCCG TGCAGCAATA AATAAAAAGT CTGCTATTTG   5400

CGGAgcaGAA GCGACTCCCT GCTCTGCCTG GGACAAAGCT TCCTGCCATC GCCCTTCCTG   5460

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GACCACCGCG GATGGAGATG GTGTCTCCCG TGCGATGGGT TCTGATATAA AAGGGAAAAG   5820

AAAACGGACC TACACCCACG TGGTCCTGTG CGCAACAGAC AAACACGCCG GCAGGACGTA   5880

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ACTCACTCCT TGCTTTTCAG AGGAAGGAGG TGATCCTGCA TCCTGTTTCT TTGTCTCACG   6000

TGCTGTGTCC GACGCATGTA TGCAGGAAAA AAGCACATAT GCACCGGCAC GCTCTAACTG   6060

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CAGCCCTGAA ACGTGTATCC GACGCACACC ATCAAAACGC GCACACCGTT CAAGCGCCCC    6120

GCGTGGCACC CGGTGCGAAA CTCCCAAACG AACGCAAGCC TCCTGCAAAA GAAAGAAGCG    6180

CAATATAAAT TCAGCGGCGA GAAAGTCCGA CCGAGGCATC CGCAGACGCG TGCCCAACGC    6240

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ACAAAAGCTG TGTTCTGCAC TAATCCCCGC AAACGTTTTG TCTAAGCCAG AGCGCCACCC    6360

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CCTGCACGTA TTTGATGCGT CTTCGCGCCA ACGCACACCA CGCGTCTGCA AGAAATCTTC    6480

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TCATCACGGG TGTGCGCGGT TAGAACCACC TGTGCTCCGC AGCGAGCAGC CACGTGGTCA    6660

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CACGCGTGCA CCGCACCGGc AGAAATCTGC TGCACGAAAC ACGGAAGGGG AGGAGAAAAA    6780

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TGATCAACCG TGACCGCGCA CGCACACACC CCAAAGTCAG GAGCGAGCTC GTGCGCCGCA    6900

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CTCGGCACAA GGAAATGCCC AAAGctACGC GCCACGTGGA CGAGCAGCGG GTGAAGCTTC    7020

TGCCTAGACT CACTCACCTA TAAAGACGGG CACGCTGCAC AGTGTGCCGC ACCGCGcgCG    7080

TTACACCGCG CACCATCTAG CCGGTCCTCG CGCCAGCGGG TGAACCCGCT TCGGAAGCAG    7140

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TGTTATGCTG ATAGTCCTTA ACAAAAACGC AAAAGACCTC GCCACCATCC AGTTCCAAAG    7500

ACAGAACAGT ACTCCTGGTT AAGGCACGAA ACAATCTATc GAAgnTTTGt GCGCAAGTTC    7560

aAGGGGAACG GACACGCCCC GATGGTCATA CATAACCGCA GrCAAACGCC CTTCCTTTCT    7620

GCCAgCACAG CGGCATACTT CCCCAACTGG ACGCGCCTTT TCCCCTTCAA ACGCCTTTCA    7680

TCCACAATCC AATCCTCCAT GCACAGAAAG CGAACACGCC GCAAACTGGG ACGGTAGGAT    7740

TCGAACtACG GAATGACGGT ACCAAAAACC GTTGGCTTAC CACTTGCCGA CGTCCCAAAG    7800
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ATATCCTACC CACATAACCG GACACGCACA CACCAACACC ACCGCTTTGC AAGCAGCTTA   7860

TGCGCGCGCC GAAGCTCCTC CTCATCCCGA TACAGACCAA AAACCGCGCT CCCGCTTCCA   7920

CTCATCGCTG TAAAGCACGC ACCCGCACGG GCCAGATCCC AACGCGCAAG GGCGACTACA   7980

GGGTACCGAc GCTGTACAGG GGCATCTAAG CTATTAAAAA ACCGCCACCG CGCACAATCC   8040

TGTGCATAGT GCGCAGAAAG CGCGGTAGCC CCACGCAGAG AGTACTGCTC GCCGTCGGCA   8100

GCATGTACGC CGCACGCACG CAACCTGTcC AAATCCTcAT AGGcCTGTGC AGAACCGCTG   8160

TGCAATCCCG GcCAGACCAA AAGCCCCAGA TAGCCAGTCT TTGGAACAAG GGGAACGAGC   8220

TGCTcACCAC CACCTAGcAC gCACGCAGcC TGGGAAGCCA GGAAAAAAGG GACATCAcTG   8280

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CAaGGCCACA CAAAaGCGCG GCAGCATtCA GCAGACCCCC CACCAAGTCC AGACCtGCaG   8400

GGATACGCTT CACTACGCGC ACGCGCACAC CATCGTGAAC GCCAGTTACC TGACAAAACC   8460

GCGCATACGC ACGGGTCAGC GTGTTTTCTC GAGGCAGAGC CATATAAGGC GAACACACCT   8520

CACACCGGCC AGGGATATCC AGGCGCGAAA GAGACAAAGA ATCCGCAAGC GTAATGCGCT   8580

GCATTACACT CTCAATCGAG TGAAGACCAT CGGCCCGAgT GCACCAACCC ACAGATGCAT   8640

GTTCACCTTT GCGTGAGgCG CAAACTCAGC GACTGCACCC GCCATTCTAT GACAAGCGGA   8700

CACAGCGTGT CAATTCCCCC TTCTCTCTAC cTGCACCCAA AACACAAGAG AAAAAATACC   8760

TGTGCCTATT AGGCACAGTT GACAGCGTGT GCGCTCCCCT cTACGATCCA CCCCTAGCTT   8820

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ACGATGACTT TGAAGACGAC GATTTTGAAT ATGAAGATGA GGACAATGAC CTAGACTTTG   9060

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TGTGATGCGA GACTGCTAAG AAATCTTAAT AAAAAAGTTT TTGATAAAGC GTGCGCGTTC   9180

GTCTGCCTTT TTCCAGTATG GGCTGTGGGG GAAGCGTTCC AGTATTGTCT TGTATGCTTC   9240

GAGCGCGAGG CGTACGTTTC TCTGTGCGCC GTTGATCTCA TAGGCTTGTC CACGCAGGAA   9300

CCACGCTTCG TCCATTCGTT CGTGAGAAGG GAACTGCGCA AAGAAATCGC CGAGCGAAgn   9360

GgGGCATCTC GCGCGTTTCC CTGTGCACAA AACTGGCGCG CTTCTGCTAG GTGATCGCGT   9420

TTTTCTTGAC CCTCTTTGTG AGCAGATGCC GGGACATGCG CCTCAATAGG CGCAgCTGAG   9480

GGAGCAGAAG GTTGAGACGC TGGTGAAATC TTCCGCGGAG AGTACCGCTC CGACACACCC   9540
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TGTGCTACTG CATCCGACGG CACAGGGTCA CGTCCTCCTA CGGTGGGTTC CCGATCTTTT   9600

TTTTCAtCAG GACGGGGCGT ACCGTGCTGA GCTTTCTCTG CAACAGCAGT ATCCGTCTGA   9660

TCCTGCCGGA CAGGCGCTCC AGTATGGGCA GCGGCGCGCT GAGAACCAGA AGTTCCACTC   9720

TCTTCTGCTC TGCGCTCGGT ACCCGTTCCC GCAGAGATAA CTCAGAAACG ACAGTATCAG   9780

GAGGAGACGA CACCGTACGC CGGTACTCAG GCGCACGCAC CACACGCGCG AGCCCTTCCC   9840

GCTTCGGTAC CACCTTGACC GCAAGTGCGT CGGAGACAAA ATCACCCCGA AACACATCAA   9900

AATAGGAGAA CGCTAAGACA AAATCACCCT CTCGCTCAGC ACTAAAGGTA AAAAGCGAAT   9960

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ACGTACACCC AACCTTCGcC CGGaTACAAA ACCTcAAGTT TTTGcCCCAC TGcAAGcTGT   10080

aCCGcGCGCG AAACGgGGCT ACCTtCATCC TtCAGGgCGG TTCTTcAGGc ACCATCGCGc   10140

GTGGAGAATC CTcTGcCGGC TCAGGCTCAG CCTGcAcCTC CGcCTCACGA GGAGGsTCTG   10200

ATGCAGGGGG CGGA   10214

(2) INFORMATION FOR SEQ ID NO: 50:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 660 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 50:

CTAATGAAGG CGATGTTTTC TTCTGAAAAG GACCCGTGGT ACCTACTCGG CGCGGGGGTT   60

GCGTGCGGTT TGGGAATTGC CGCTTCGGcG CTTTCTCAAG GGCGGGCTGC CGCAGCCGGC   120

GCCGATGCGC TTGCAGAAAC AGGTAAAGGA TTTAGCCAGT ATTTGACTAT CGTTGGTTTG   180

TGTGAGACGG TGGCGCTTCT GGTGATGGTT TTTGGTATTA TCAACTGCTA GATGTGGTGA   240

ACGTTGTGGT ATAGCGCTTC GACCATGCTT TTGATAGACG TAGGGAACTC GCACGTATTT   300

TCGGAATCCA AGGCGAGAAT GGTGGCCGTG TGTGCGTGCG TGAGTTGTTT CGCCTTGCGC   360

CTGACGCGCG TAAAACCCAA GATGAGTACT CGCTTCTCAT CCATGCGCTT TGCGAACGTG   420

CGGGGGTCGG CCGTGCTTCT CTCCGTGATG CGTTTATTtC CTCCGTCGTG CCTGTGTTGA   480

CAAAGACCAT TGCAGATGCG GTCGCTCAGA TTAGCGGcGT CCAGCCGtTG TCTTTGGCCC   540

GTGGGCGTAm GArCACTTGC CGGTGCGCAT ACCAGAGCCA gTGCGCGCGG AAAATTGGCAC   600

TGACTTGGTA gCCAAmGCGg TGGCGGCCTA TGTGCAnTTy CGTTCTGCTT GCGTGGGTAT   660

(2) INFORMATION FOR SEQ ID NO: 51:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 8648 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 51:

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ATTTCCACAT TACTCAATAA AAAGACCCAG GATTTTAAAA AAAAATACCG CTACACCGCG        60

GATGTACTTC TTATAGATGA CATTCATTTT TTTGAAAACA AAGACGGATT ACAAGAAGAG       120

CTTTTCTATA CGTTCAACGA ACTTTTCGAG AAAAAAAAAC AAATTATCTT TACCTGCGAC       180

AGGCCTGTAC AAGAATTGAA AAATCTCTCT TCTCGCTTAc GCTCGAGGTG CTCCCGAGGG       240

CTTAGCACTG ATCTGAATAT GCCATGTTTT GAAACGCGCT GTGCTATCTT GATTAAAAAA       300

ATACAAAACT ATAACAGCAC CTATCCTCAC AAAGCCATCC ACATTTCAGA CGATGTTGTC       360

CGACTTGTTT CTGAAAACAT TTCTTCAAAT ATCAGGGATC TTGAGGGGGC ATTAACAAAA       420

ATTATCGCTT TCATTGAAGT GTCGGGATCC ATCACGATAG ATATCGTTCC CTCTCTCCTA       480

AAAGAGTTCT TCCTCTCTGC AAGGCCAAAA CACATCACAG TAGAAACTAT TCTTCATGTA       540

GTTGCAGATC ACTTTAACAT TTCGTATTCA GATCTAAAGG GTAAGAAACG CAATAAAAGC       600

GTTGTTTATC CTCGGCAAAT CGCTATGTTT CTCTCAAAGG AACTGACAGA GCTCTCCACT       660

ACTGAACTTG GTATCGAATT TGGTGGCAGA GATCATTCAA CCGTCATTTA CGGATGTCAA       720

AAAATAGAAG GAGAAATTCT CACTAATCCT TCGTTACAGG CAAATCTTGA TTTGCTGAAA       780

AGTAAAGTTC AAGATTCAAT CCGCTAGGGC GTAGACACTG AATTCGATGG GGATAAGTGG       840

TGGATAAAaG AATATAAATT AGTCATTACA CTTTACTCAC GAATATCCCC CTTTTTTTAG       900

AGAAAAAATA TACTTTCTTC ACAaGCTTGT GTGCGGTTTT TGTTTGGTAA TTCTCGAGAC       960

ATAaGCACTT ATCCAGATAT TCACAGTTAC TATTATGTGA TACGACTACA TTCTTTATAC      1020

TTATAAGATT AATAAGGAGG AAACTAACTG TGAAAATCCT ATGCGAGAAA GAAGCCTTTC      1080

TGAAGGAAAT AAGCACAGCA CAAGAGGTTA TTTCAAATAA AAAAAACACG TCTATTTTTT      1140

CGAACGTCCT ATTAGCTGCT CAAGGAGCCC TGCTTACCAT CAGAGCAACC GACACAAAAG      1200

TTACCTTTGA AACTAGCATT CCCGTCAATG TTCTCGCCGA AGaCaACGAC AGTTTTTTGC      1260

GACAAACTTG TGAATGTTGT TTCTGCCCTT CCAACAAAAG AAATCGAATT AACGTTATGT      1320

GAAGAACAAC TTGTCATTAC cCCTCCAAAC AAAAAGATAA GCTTTcAGCT CAGAACCCTC      1380
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TCGCATGAGa GTTTTCCATG TTTCCCTCAA AATGAAGGAG GCGTCTCTCT TGCTGTGCCT    1440

ACCTCCGATC TTAGAAACAT GATTAACCAT ACCGTTTTTG CAGTTTCAGA AGACAGTACG    1500

CGCCATTTTA TCAATGGCGT ACACGTTGAT TTTCAGTATG GAAATATTAT TTGTGTTTCA    1560

ACAGATGGAA AGCGGCTCGC CTATATAGAA AAAAAGGGAG AATCCTCTCC CCAATCCTTT    1620

TCGGGTGTTA TTGTGCCAAC TAAGATCTTA GGCATAGTAA ACCGTAAGCT TACCCCTGAA    1680

GGATCAGTGA CGCTATGCAT TACGTCGCAG CACGTTTACT TTTTTTTCGG TGGATATAAG    1740

TTTTCTTCTG TGCTTATTGA GGGGCAATTT CCTAATTACA AAGAGTAAT CCCTGATCAT     1800

CAGGAGCGTT CTTTTTGTGT TGGACGTGTG GAGCTAATGG AGGCACTTAA ACGAGTCTCG    1860

TTGTTGGTAG AACAAAAATC TCACAGGATA TTTATTACCA TACAGCAGGG TTTGTTGACT    1920

TTAAGCTCAA AAGCTCACAC TCAAGAAAAT GAAATAGGTG ATGCTCAGGA AGAAATAGCC    1980

TGTGCTTATA CAGGAGAAAG TGAGGTCATA GCTCTTAACT ATCTATACCT TGAAGAACCG    2040

CTTAAGGTTT TTACTTCGAA GGAGGTTCAA GTGGAATTTA CCGATCCTGC AAAAGCACTC    2100

ACGCTTCGTG CTGTACCAAA CACGGACTGC TTTCACATCA TTATGCCTAT GCAAACGGAG    2160

TGATTCTTTG CCTTTTCTCA CAGTGACTGC AATAAATTTC AGAAATCTTG CACATCACAC    2220

GATTGATATA TCCTCTCCTG AGGTTTTTTT TGTGGGAAAT AACGGACAGG GAAAAACCAA    2280

TATACTTGAG GTTCTATATC TTGCTGCGTA CGGAAATTCG TTTCGAACAC GCACCGAAAG    2340

CGAACTGTAT GCAACTCACG CGCGTTCGAA TGAGTATCGG GTAAAAGTTA TGTACCGCGG    2400

GGAGTATACC CACACAGTGC AGATTTTCTC CAAAAATGGA AAAAAGCGCA TTGAGAAAAA    2460

CTTGAAAAAA ATAAGGACAA AAAAAGAACT TATCAGCAGT ATTCCCTGTA TTTTGTTTTT    2520

TCATAACGAT TTGGACTTCG TAGTTGGTAC GCCAGAACGC AGACGCTTCT TTTTGGATCA    2580

ATCCCTTTCG ATGTGTAATC CTCTGTATTT GGAATACTTG CAAAAATATC ACGCACTAAC    2640

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GCAAATTGCA ACCGTGGGTT TTGATCTCGT GCAGTGGAGA ACTCAGCTTG TCCGTGACTT    2760

TAACGTGATT TTTACTAAGT ATTATGAGCG CCTTGGAGAC CTTGCGCAGG TGCGCATTGA    2820

GTATAAGCCT TCATGGTCTG ACTCCTCAGT TGAGGAGATC GTACATTCTC TTTACAAGAG    2880

ACGTAAGCAC GATCTTGCGA TGGGGATGAG TATGTCAGGT CCTCATAGAG ATAAGATTCA    2940

CTTTACTCGG TCGCAGGCGC TTTTCATTCC TCAGGCTTCT ACCGGACAGA GGCGGTTGGT    3000

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CGTACTCTTA ATGGATGATG TCTTGTTAGA GCTTGATCCT GAGAAGCGGG AAAGGTTCAT    3120
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GATGAGTTTG CCTCCGTATG ATCAGCTGTT TTGTACATTT TTGCCAGGGG AAGCGTACAG      3180

GCGATACGGG CGTGAAAAAA CGCGGGTATA TTTTGTTTCT GAAGGGGCGT GTCATGAATA      3240

ATGGTGTGAA TAAGCTATCG GACTTACTCG TGTTGACCAC TGAATATATC CAAGCTTCCT      3300

ATGAAACGGA GGCGTTTGAT GCGCATCGAG AATGGGTGTG TATTGTGGGT AACCCCGTTG      3360

CGTTACACAG CACGCTGGTA GATATCAGAA ATGGGAAAGT TGTGGTCAAG GTGACTCATC      3420

CTGGTTGGGC ACAATACCTT TTGTTAAAGA AAGACGAAAT TGTACATGCC CTTCGTAGGC      3480

GATATCCGTC GTTGGGAGTG ACGGGTATGA GTACGTACGT AGATTCTACC TCACGTACCC      3540

CTTCTGCGAA GAAGGACATG CAGGGACTTT CGGTATCAGA AAAGCAGACT CGTCCTGTGC      3600

CTGAACTTGC CGAGGTATTT GAACAGCTCC GAACGCTTTT TCAGGTGAAA ACGGAAGAAC      3660

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TTTCTATAGA GACAGAAGTC AAGCGTGCTT ACATAGACTA TTCTATGTCC GTCATAGTTT      3900

CTCGTGCGCT TCCGGATGTC CGCGACGGTT TAAAGCCTGT TCACAGACGT ATTCTCTACG      3960

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GGGACGTTTT GGGAAGCTTT CATCCTCATG GGGATGCGTC CGTCTATGAC GCGCTAGTGC      4080

GTCTTGGGCA AGATTTTTCC CTTCGTTATC CAGTCATTCA TCCTCAAGGA AATTTCGGGA      4140

CTATCGGGGG CGACCtCCGG CAGCGTATCG GTACACCGAA GCGAAGATGG CGCGTATTGC      4200

AGAATCTATG GTAGAGGACA TAAAAAAGGA AACGGTTTCC TTTGTTCCCA ATTTTGACGA      4260

TTCTGACGTA GAGCCCACGG TTCTTCCTGG AAGGTTTCCT TTTCTTCTTG CGAATGGGTC      4320

CAGTGGTATT GCAGTTGGTA TGACTACAAA CATGCCACCG CATAATTTGC GTGAGATAGC      4380

CGCAGCTATC TCTGCGTACA TCGAGAACCC AAATCTTTCG ATTCAGGAGT TATGCGATTG      4440

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GCTTGTTATG CGTATTGGGG AACTTGCACG TGCGAAAGTG ATCGAAGGTA TTGCGAATGT      4680

AAACGACGAG ACTTCCGATC GTACAGGsTA CGCATAGTGG TAGAGCTCAA AAAGGgTACC      4740

CCCGCACAGG TAGTACTCAA TCACCTGTTT GCAAAGACTC CCCTGCAGTC CTCTTTTAAT      4800

GTGATTAATC TTGCTTTGGT AGAGGGAAGA CCTCGAATGC TCACGCTCAA GGACCTAGTG      4860
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CGCTACTTTG TAGAACACCG GGTCGATGTA GTGACTCGGC GTGCGCATTT TGAATTACGT    4920

AAGGCTCAGG AGCGCATACA CTTGGTGCGT GCGCTGATAC GTGCCTTGGA TGCCATTGAT    4980

AAAATCATCA CGCTTATCCG TCATTCGCAG AACACAGAGC TTGCAAAACA GCGTTTGCGT    5040

GAACAATTTG ACTTTGACAA CGTGCAGGCG CAGGCGATCG TAGATATGCA GATGAAGCGC    5100

TTGACAGGTT TGGAAGTCGA GAGTTTGCGT ACGGAATTGA AAGATTTGAC GGAGCTGATT    5160

TCTTCTCTGG aGGAGTTACT TACTTCTCCC CAAAAGGTCT TGGGAGTTGT TAAGAAAGAG    5220

ACGCGTGATA TCGCAGATAT GTTTGGGGAT GATCGGCGTA CAGATATTGT GAGCAATGAA    5280

ATAGAATATC TGGATGTAGA AGATTTTATC CAGAAAGAGG AAATGGTTAT TCTTATTTCC    5340

CATCTTGGTT ACATTAAGCG CGTTCCAGTG TCTGCGTATA GAAATCAGAA TCGGGGAGGA    5400

AAgGGCTCAA GTTCAGCGAA TCTGGCGGCT CACGATTTTA TTAGCCAGAT ATTTACTGCA    5460

TCAACACATG ACTACGTGAT GTTTGTCACG AGCCGTGGGC GrGCCTATTG GCTAAAAGTA    5520

TACGGGATTC CTGAATCTGG TCGGGCGAAT CGTGGTTCGC ATATTAAGTC GCTTCTCATG    5580

GTAGCGACGG ACGAGGAGAT CACGGCCATC GTATCTTTGA GAGAGTTTAG TAATAAAAGT    5640

TATGTTTTTA TGGCTACTGC GCGAGGTGTA GTTAAAAAGG TAACTACTGA TAATTTTGTG    5700

AATGCGAAGA CGCGCGGTAT TATAGCGCTT AAGCTGAGCG GAGGTGACAC GCTGGTGAGC    5760

GCAtGTTGGT GCAGGACGAA GATGAAGTAA TGCTTATTAC GCGTCAGGGA AAAGCATTGC    5820

GCATGTCGGG GAGGGAGGTG CGCGAGATGG GTCGCAATTC CAGTGGGGTG ATTGGGATAA    5880

AATTGACGTC CGAGGACCTA GTGGCGGGGG TTTTGCGAGT AAGCGAACAA CGGAAAGTAC    5940

TGATAATGAC GGAGAATGGA TATGGTAAGC GGGTCAGTTT TTCAGAATTT TCTGTACATG    6000

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GCGTGCAGAA GTTGATGTTT CACGTGAAAC TgTsGGGATG AGGAGTGGGA TCAAATCTAC    6360

CCTAATTCTG GAGGATTATT TGGGTTCACG TTCATGTAAA CTTTATGGGG GTTGTGTATG    6420

GGGACTCGTG TCAGATTTTC CTTCTGCGGT ATTGCAGGTG TATGTTTACT CGCACTAGGT    6480

TTTTTAGTTA GTTGTTCTTT GCAATCTTCA CGAAGCGCTA CAAAGAAATC TGAGGCGCGG    6540

AGGACTTCTT ATCGGATCGG TCTCATGACA AGTACGGGAT CTyAGTCTGT AGATGATGTC    6600
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CTTGCGAAGA CACGCCTCGT CAGTATCTAC GGAGAGGCTC GTGGGGAAAC GGGTGGAAGG    6660

ATTGTCCATG TTACTTACTC CGATAACTTC TCCCACGACC ATGAAGCAAC CGTTTCTAAG    6720

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GACTACTTGT TCGGTGGATA TGCCGTTCCG TGGGTTGCGG AAAGGATGGG GGCGCGCACA    6960

TtGGTGCATG TCTCTTTTCC CCGGCATATG TCCTACCCCG GTTTGAGGGT TAGGCGTACG    7020

GTGATGAGGG CAGCATGTAC CGATTTGGGA CTTTCCTTCG CACACGAGGA AgCGCCTGAt    7080

CCTGTAGAcG GTGTCAGTGA CGGAGAACTT GAGGATTTTT TCCACAAGAC GATTGTGAAG    7140

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TACGCTGATG CGCTCGGGGT GCATTATGCT GAGCTTGAAG ACGTGTATAA AATACGAGAG    7320

AAGGTTGAGA AGTCATTGGk TTCTTCGGCG CAGAGGGGCG CTTTGGATTA AATTTAAATG    7380

CACAGGCATT TACGGTGACC ATGGGTTTTG TGGAGTATGC GCGCAAAATC ATAGATGGCG    7440

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ACGCACATTG GCGTATTGCT CCTTACCTAA GACTGAAAAC GCACGAAATT GTTCCGAATC    7560

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TATGTGCGCA CGTGGTTCTA TCCACATACT ATCGTAGCAC GGTATGCGGT AGCCTACCCA    8040

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AATACCTACT CTGGCAGCAT TGGCGACCTG CTGTGCTACC CCTTGGGCAG GTACGACGTC    8220

TGGGGGGAGA CCTCCGTTGT CAAGATAACT TTTGTAGCCC AGGGGAAGGT ATACACGTGC    8280

TTCTATGCCT GCGTTTAGGC CGTGCAAGGC ATGGGTGTAA TCATCTCCCG AACGAGTTTC    8340
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CCCAAAAACA	GACGCCGCCC	CTGTTGCGCC	GTATACACCT	CCTGAAAGCC	AACGcCACTg	8460
cGCTGTAACC	AGCGCGTCTA	TGCCTAATGA	GTCCACGTGC	TGTACCATCC	AGCTGAATAT	8520
ACGACGCACC	GTCCGTAATG	ACGGATACGT	CTTCTCCGCG	AGTTCTAGTG	CCTGTTCGAC	8580
GACACGTGCT	CTCGcACTGT	TCGTATCCCG	GTAGGTATTT	CCGGCATCCG	nAGCTAAAAT	8640
GAAGCGGA						8648

(2) INFORMATION FOR SEQ ID NO: 52:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 6993 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 52:

CACCAnCGTC	CCGnATCCAG	TTCCACGCAC	ATTGGCAACG	GCGCACAAgC	GCTCTATCTG	60
ATCTTTGTGT	ATATCAGAGA	AAAcGCGAGC	ACTGCAGAAA	TATCTCCCGA	ATTAATTTGC	120
AATATATTGC	ATACATGCCG	GAATGGTACC	TGGTACGAAA	TGCACGGCGG	CATACCACGC	180
ACTTGTGACA	ATTCGTAGAT	CCTTTTATGC	CGCATAAATT	CGTGTTCGCT	TTTTGCCGCA	240
TGTATTCCCC	ACGCAACACG	CTCACTTTTA	TCGTAATCCT	CGTATATCTT	AAGAACATCA	300
AGATCAAAAC	TAATGGAAAA	CTCGGTATTT	GGACGTGTGG	AAACAAAAAG	GTATCGCAAT	360
ACTTCAGGCT	GATATACTTC	AAGCACATCA	CGCAGCCCAA	CCACTTTTCC	CGCGGACGAA	420
GACATCTTCC	CAGGCAAACC	TTTTAATCCA	ATAAAATCAT	AACGAAAAGA	AACAGGCGCA	480
GGCCAGTGAT	AAATGTGATC	AGAAATTAAA	CGCGCAGTGT	CAAAAGAACC	TCCCTGAGAA	540
TGATGATCCT	TCCCTGCAGG	CTCAAATACC	ACATGCTCCT	TACTCCACCG	CATAGCCCAA	600
TCAACGCGCC	AGcTAAGTTT	TACCGCAGAC	GTCTGGCGTA	AATCCACCTG	CTCCCCATGC	660
CCACACTCGC	AATGATACTG	AAGACACCAG	TGGCTATCCC	ACGCATCAAC	CGTGGTGCAG	720
TCTTTATGGC	ACGCTGTACA	AAACACCGAT	ACGGGCCAAT	ACGTTCCACT	GATTTTATGC	780
TGCTCATCTC	GATATTCGTT	TAAAATCGCT	TGAATACGGT	GCCGATTGTC	GAGCGCAATC	840
TTTATTTCCT	GTGCGTATAC	CCCCGCCTGG	TATTGCTTTG	ACTGATAAAC	GTATTCAGGA	900
TAAATACCTA	CCTCCGGGAG	CGCCGATTCA	ATTTCCCGCT	cATGGTGCCg	CGCGTAcTAT	960
CTTCCTGCTG	AAAGGGATCA	GGAACTGAAG	TGATAGGCAT	GCGAATATAC	TGCTTCAATT	1020

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CATCTTGAGC AGGTACATTG TCGGGAATCC TACGAAAAAC GTCATAATCG TCCCACGAAT    1080

GTACAAAGCG CACTGATTTC CCCTGGTCAC GCAGGcCCGC ACTACAAGGT CAACGGAAAT    1140

AATCTCTCTG AAATTACCAA TATGTACCGT TCCTGAGGGG GTAATCCCCG ATGCACAGGT    1200

GTATTGATCA CAGTCAGCAC GTTCCTgATA ATCTgTGCGC AACCTgTCAG CCCAATGAAG    1260

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ACACACAACA GCCATACGGT GAGTGCTCGC ATCTGCCTGG CAGACCGTAT GGTCACTCCC    1440

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TATGTATGCT CCTTTGACGT ATCGTGAATG AACGCAAGTC TAACAATAGC GCGGCATATC    1740

CGAAGCGGTC CGGACTCACA CACAAATAC CTTGtGCGCA CTCACCCCGA GCAATGAAAA      1800

aGCTTTTTTA TAaGGTCCcC TTTCTTGGTT TTCTGTACCA GACACCTCGT GCGCGGGAAG    1860

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CACGAGCTCA TCTGCACTAT TTACATACAC ACCTTCAATA GCAGGAAAGG GTGTGCCCCC    2220

TATCCCCTGC TGTCCAATAG CATGCATGAA ACGTCCTTCC TCATCGAACA GCAATATGGT    2280

ATTCACCAGC GCAAGGTTTT CTTCCGGATC ATGCTGCACG TGTTCTGGTA ACACGGCATC    2340

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ATTGCGTTTT TCTCGGGATT AAAAATAACT GCAAGCACAT CCCCAAACGA AtCATTCGCA    2520

TGACcTTGCC AGTTGCAGCA TGTGCCACGT AGAAAATACC GTCTTTCATA CACAGCTGTA    2580

TATTAGACTG CGATTGCGCA TACCCCGCGT CGGGGAAATG CAGTTGATTT TCAGCATCCC    2640

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AAGACACCAA CACGAGAAAA CTACCCAGCA AGAAAAAAGT AAAAAATCCC AACCGCAACG    2760
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GGTGACGCGT CACAACGCTA CAGGACACGA GGATAGAGAT ACTCAAAACC ACAAAACGGC   2820

ACCAAAGCTT GCGGnAATGC GCACGCGACC TTCCGCATCC TGCCCATTTT CTAGCAGCGC   2880

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CCCTTCTGCA TCCTTATAGC GGACATTTAA GCGCCGCGCC TGATAGTCTG TGCAATTCGA   3000

CGCAGAAGTC ACCTCTCCCC ACGAACCACC CTGGCGTCCA GGCATCCACG CCTCCAAATC   3060

CCACTTGCGA TACGCAGGCG CACCCAAATC TCCCGCACAC ACTTCCACCA CACGAAAAGG   3120

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AGAATCACTC GGTGTACAGT ACGCAAACAT TTCAAGTTTG GTAAATTGGT GCACGCGATA   3240

AAGACCGCGA GAAAACTGGC CTGcAGCACC AGCCTCTTTa CGAAAACAAT GCGAGAGCCC   3300

TGCGTATAAA CGCGGTAAAC TCCGCTCTTC AAGAACCTCG CCTGcATGGT ATGCCCCAG   3360

CGTAATTTCT GCAGTTGCTA CTAAACAGCG GTGTTCTCCC TCAATACGAT AGATATTCGA   3420

TCCACTCCCC CGCGGATTAA AACCCAAACC ACACACCATA CCCTCACGAG CAATGTcAGG   3480

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CCCCGCTTCA AAATCAACTA TATCCAGCAA GCGCGCTAAT TCCACGTGAT CACGTGGcGA   3660

AAAACTAAAG CATGGAGGCA CCCCACAGCG CTTGATTTCG AGATTATCAC TGTCTGATCG   3720

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ATCGGAAATC TGTACCAATA GACGCTCGCT GTGAGCAATG CGATCTTTTA GTGCTCTGCC   3840

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ACTGGTGACG GCGCACGACA GTACCCATAA TTGGCAAACG ATCGTTGAGC ATCTGCATGA   4500

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CCCGAGATCC CGTCGATGCA ACATACAATT CCAAACGCAC GCGTAAATCC TGACCGTGCT    4620

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ATCAGGATGG TAAAAAGAG ATATTGAAAG ATGCGCCTTA TCCAGATACA AGGCATCAAC     4860

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AGGATATCCA AAACGCAGGA GCAAACGTGC GTAAgCTTcA CGAGCAGCAC CGTCGTACGG    5040

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GAAACCGTCT GCCTTTTGCG TGTGAAAACG CGCAAGTTGC ATGCGATACT CATCTTCGTA    5160

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TACTGTCAAC CCAACTTTTG CAGTTGCAAG CGCCTCAGTA TGTTTACCCA ACTTCAGAAG    5280

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ACCGTGATAT TGCAACGCAC GTTCAACGTA CGTGAGCGCA CGCGGATAAT GACCAGCCTC    5580

GTACGAGATA AGCGCAAGcg ACAACAACGC CTTGCGATTC TCTGCCTGAC GCTCCAGCGC    5640

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ATACACGCAC AGCAGGCCTT TCATGCTTTT TCCCTTTCCT CTATGGCCGC TCAGATACAC    6120

ATGCAGGCTC GGAATCACCC CGCAGaCAGA TACAATCTTT ATAGTATTTA TCTTATGTGC    6180

TTCCATGTCT TGGATAATAA AATCGAAGGC ACCCCACGAA ACCTTCTCGT ACTTTACGGG    6240
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AATTTTTCCA AAAAGATTAA ATACAAATCC ACCTAACGTT CCAAACTCTT GAGAAGGAAA   6300

AACAGTATGC AAACACTCAG ACAAATCTTC CAAATCCACA CGCGCATCGC ACAACCACAC   6360

GCCCTGTCCG AGCGGTTCGA TATCCTCCCG CTCGTGGTCA AACTCATCCT GGATATCCCC   6420

AACAATCTCT TCAATAATGT CTTCCATGCA CGCAATACCC GAAACGCCGC CGTACTCGTC   6480

CACCGCGATC GCAATGTGCA CGTGCCTGCG CTTAAACTCT CGCAGAAGAC TGTCAATTCG   6540

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GAAGTGTCAG AAAGATCCAC TATAmCGCGG rTCATAtCCT GcTTTTCTTC ATTCAGCGGT   6840

TGCTGAAAAA TATGGGTAAC AGCGTGCCTG CGCCTCAACC AGTCTATGAC TCCCATGGTA   6900

TACCCGATGA TAGCACCCGA CACGTGTGCG CCAGTATGCG CTCCTGCAAA CGCAACATCT   6960

CTTGTCCAGG GnTCCTnCGA TCAGACTCTA TAA   6993

(2) INFORMATION FOR SEQ ID NO: 53:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 5460 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 53:

TCGCGnnAGT CAAAAACGGC AACACTGAGT TTTTGCTCAT TGGGGGCAGC CAGGGGTACA   60

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TGCGCGGTCC GGAACAGTGG GGTGAAGACA GTGTCACTCC CAAGGATAGG GTAAGCCAAT   180

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TTCAAATTCC GTGGCGGGGC GCCAGGGGCg cGCACCCTGC GGTGCCCACG TGAGCGAGGG   540

CGTGCGCGCA AgcTCTTCCT GCGCGCGCCG TGCGTACTCG GCCCAGTCGG TGACCGCGTA   600

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TAGGTAGCCA CCCGGTGCAA GGGCGCGCGC GAGTAGGTCT GTGCGCGGGC GATACAGCAG      660

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AGCCCCTCTG TGCGTGCATA AAAGGGCATA CAGGAAGAAA GTACTGCGCC CGCTACACAC     1920

GGCACCACAC AAGAAACCAG TACAAACGCG CACTGGCGAG CGAGAACCAT GCGATTAAAA     1980

CTCAAAAGAC AAATCCACGG TGGTGAACTC AGAGCGTGTA AAACGGTTAA GACTTGACTC     2040

AAAGCGCACG TTTGCCTCTT TGwCnCTTCG CTCAAATACG AAATGTAGTA CACGCCCAAG     2100

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GCATTTACCA CTTTTGCATC CTGTAAGCAA TTGCGCATTT CTTGTGGGTA ATCATTCCTC     2220

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AGTTTCCACG AAATAAAGAG AGACTCAGCG TTGTGTTTGA GTTCTGCAAC AATACGCCTG     2340
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ACCTCTTTTT TTAAATTCGT ATTCTCCTCA TTGATGAGGA GCTCTACAAG GACTAATGCA   2460

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CGCAGGGTAT CCAAAAACTT TTCGCCGAGG AAAAGAAGCG TATTTTTCTC CTTTGGAGTA   2640

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GCGATACCAT AATCCTCGAC ATGCTCAGCG AGTTTTAATT TCATGAGCTT CCTGTTTTGT   3060

TTTATAAAAA ACTCGCTGCC CTCTTGCGTG AGTACGAGCT TGAGTGGGAG GTTCAGGATG   3120

CGTCGTTTAT GTTTTGAACT CATACTTTTC TGCGCTCCCG TTGAAGTGTG TCCGCCGTCC   3180

TTTCATTCTA TCAAGGAATG AGGGGTGGGG GATAAAGAGA TTCTACGTAG CAGACGAACC   3240

GCACCGATCC TTCCTGTGCA TGCAGGAAGG AGTCAGGAGG GGCGGTGGGG AATCAGAAAT   3300

AACCCAGAGA AAGGCTGATG TTCTGCGCAA AAGCATCCGG AGTGCTGACC GCTACAAAGA   3360

GGATAGGAGC TGCCGCACGT GAGGCGCCTG TGCATAATCG GGATTGCGAT CCAAAAGCTG   3420

CGTTAGTACC TCTTGTGCAT ACTCTTTTTC GTTCACTTTG ATTGCTAGTT TCCCAGCCTC   3480

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CTTGAGGCTG TGCGGTGGCG GCGCGGCGGT AGTGCGCTAT TGCCGTCTCC CACTGCGCGC   3660

GCAGGACATA CAACTTCCCT AGATTGCTGT TTACCTCAAA GTTTTGCGCA TCGTGGGCAA   3720

GAGCCGCCTG CAGGTGTGTT TCCGCCTCTT GCAATGCTCC CTTGTCCAAA TACAGTTTGC   3780

CCAAATTGTT GTGAGCCTTC ACGTGTGCAG GGTCCCGTGC TGCAGCCAGC TGATACTGTG   3840

TTAAGGCAAG ATCCACACGC CCTGTTTTTT kCGCTGCAAc aTnAcGCGTA GAGGAAGCGT   3900

GCCTGCGATC CATTCGCGTA GACGGCCtGC TGCGCGTGCT TTAACGCTTC TTCGTTCCTA   3960

TCGAGATCAA GCAGCACGGT TGCGAGGTTG TACAAAGTAA GCGCGTCCTC AGAATCCCGC   4020

TCTAGGATTT CTTGAAACAG ACGCACAGCC TCTTCCTTCG CACCACTTTT TGCCAGGACA   4080

CGTGyGCGTT CACGCGnGGC TGTCAGGTAT AGATCATGCG cTTCCGCAGC AGCCGCGCAT   4140

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GCCTGCAGGG CTAGATCGTG TTTTGCACGT ACCCTACAGG TGAGCCCCAG ATTAAAAAAT   4320

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AACCTGCGCA CTGCGAAAAG ACGCTTACCC AACTCATAGC TGTAGCGATA TTCGCGCCGG   4440

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CGCTTTATCG ATTTTTCAGG AGAAAAAGAC GCCGTGCGAG ACACTCCCCG GGGCGGGGTG   4920

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(2) INFORMATION FOR SEQ ID NO: 54:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 10461 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 54:

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CGAGcGCAgC CCAGGAGTTC AAAAGGGAAA TCCACGTATT GTGCCGATCC TCCATGTGCG   240

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CACATCAGCG CTTCAAACTC AACACCGTAT CCAACATGGT GTCTGATGTC TGAATCGTCT   960

TTGCGCCCGC CTGAAACCCT TTTTGGGTAA TGATCATATC CGTAAATTGA TCGGTTAAAT  1020

CTACGTTGCT CATCTCAAGT GTCCCTGCAA TCAACTTTCC CTTCCCCATC ACCCCGACG   1080

TGCTAATGTT CGCTATCCCT GaGTTGTTCG ATTGTACGTA GGTGTTCTCT CCTGCCTTCT  1140

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GTGCCCGCAT TATCAACCCC AAAGGCACtG CGCGGGTGAA AAACGTCTTT TCCCCACTTT     1980

TCAGCACAAA AAAACCACTC CCCTGAATAG ACACATCCGT ATTGATACCC GTCGTTTGCA     2040

GTGCACCTTG CGTGTGAACA GTATCGATGC TTGCAATCAG CACGCCCAAT CCCACTTCCT     2100

TGGGATTCAC TCCTCCAACT TCTTCATTCG GACGCGCAGC cGcACTCAGT TGCTGAGAAA     2160

TAAGATCTTG AAAATTAACA CGCCCACGCT TAAAACCGGT AGTGTTAACG TTCGCGACGT     2220

TGTTCCCAAT GACATCCATG CGCGTTTGAT GATTCTGCAT ACCAGACACA CCTGAAAAAA     2280

GTGACCGCAT CATATGCTCT GTGTCCTCCT CATGTGACTC ATTTTCCTAA TCTCTCTTTC     2340

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CCATTTCTAA ACGCGTACGC TCAGCGGCGG TCATTTCAAA CCGCATATTA GTGTTCTGTA     2820

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cgTAGGCTGC CGTCTGCGAT GCCAAATGCC CGTCCTCTGC GTGCGCACCA GCGCCAAACC     3060

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CACGCCTGCA CGCTCCCCCT CACGCAGCGA CTCgTACCGT GCTCTTCCGC CCCCGCATCC     3480
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GACGGCCACG ACGCACCACC CGAAGCTTCC TGCGCCGCGC gnACGTAATC AAAGGGCCGC 4200

ACTCCTGACG CCGCCTCCTG CGCAGcaCGc AAACCAGTCT CGTACGCCAC GAGAAATACA 4260

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TTCCTCACCG ATTTTATCGA TGGCAAAATT GCCCGCGCAA GACGAGAAAC GTCCGCGTG 5220

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CGGCACACCC TCGCTGCGTC AAGATGCGCA GtAACGGCAA TTGGATCAAA ATGCCGTGCA    6960
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TGCTCTCAAA ATCAACTTGA T   10461

(2) INFORMATION FOR SEQ ID NO: 55:

        (i) SEQUENCE CHARACTERISTICS:
                (A) LENGTH: 13367 base pairs
                (B) TYPE: nucleic acid
                (C) STRANDEDNESS: double
                (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 55:

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TGTGAGCAAT TGGAGCGATG AGTATGTCAA GCTGTTCCCC GAGGTGCTCT CTCTAGAGAT   360

TCTTCGCGCG CTTATGGAAG AGGGATATAA GGAAAAGGCA CTGAGGGTGG TCGAGGCTTG   420

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GAGAGATTGG TAGGGCCTTA GAACTCGGTG ATTTGCGTGA GAACGCAGAG TATAAgGnTG   960

CGCGAGAAGA ACAAACAAGG TTGAACAATA TGGTGACTCG GCTACAAGAG GAGATTGAGC   1020

GGGCACAGGT ATTCGATCCT ACCACTGTTG TAGCTGGCAG AGTTTCGTTT GGTACGGTAA   1080

TTAGCTTAAA AAATCACACA AGTGGAGAAG ATGAGACATA CACTATTCTT GGTCCGTGGG   1140

AGTCGGCTCC AGAACGTGGT ATTATTTCGT ACATGTCTCC GTTAGGTAGC AATCTGCTCA   1200

ATCGTAAGAC AGGGGAACAA CTTGCCTTTA CGGTGGGAGA ACATGAAAAG GTGTATGAGA   1260

TCTTAAGCAT CTCTGCTGCA GAGATCTAGT GAGGAAGTGT GCGATGCGAA TTATGCGGaG   1320

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ATTAATGTTA TTTCTTATGT GTCTATGTgc TGCGCTGTTT GCGCAAGAGC TGGTTCGCGA    1380

ACAGAGTGTT ACAAAGTCTG CAGATATTAC GGTGCTACTT GATACGTCTG GCACTATTTT    1440

ACCGTACCGT TCCGTGGTAA GCGGTAGTGT GCTAAAAGAT ATCGCTACTC GTTTTGTGCG    1500

TTTGGGTGAT TCGTTCCATA TTATTTCGTT TAGTGCCACG CCACGTCACG AGATTTCTCA    1560

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ACTGTGGGTG TGGTTTCCGA TCAAACGGGC GGCGTTGCAG ATAACCATGC AGTTGCTACG    2040

CACGGAAGGG AGGACGGGAC AGTCCAAGGG GTTGTTGGCA GCCATGTGGA GGTGGCACGC    2100

ACACAGGACA GACGCATAAT GCAGATCCTG CTAAAAGGGA AGGGGTTCGG CCTTCCTCAG    2160

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ATTCAGATGG TTCTGTGCGT TTTTCCGAGA AGGAGCGCAC GCTTcCCGTG TTACACTTTC    2280

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TTCATTTTCC CCCAGGGTAA CGCGTGCGGA gCATGGATGT AGTCGGTCAG GAATGACTGA    3060
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GGTGCGGCAA  ACGCCGTGTT  ATGGTATCAA  TCCTCTGTTG  CAAAAAGCAT  gAGTACGGTA      4800
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GAGGTGTCGT GCCGGGGATA TGTTGACACG TCCGTACTCC TCAGTTTGTG AGGCTCCAGT   8280

502

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CCCTGGAGGG TAAGTTGGTT GTGCTCATTA AACTCAAAGC GGTGTCCTTC TTGCTTAAAG   11760
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TAGTCAGTCT CTACCAAGGA GGAGGCCGGA TATACTGTTT TGTCCGGAAA GGTTAGAGCG    11880

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CAGACGGGGT AGGGGTCCAA GGATGTGATG GCGTTGTCTT TCGGTTn                  13367
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(2) INFORMATION FOR SEQ ID NO: 56:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 6856 base pairs

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        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear
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    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 56:
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CGTATCTGTG CCGCCGGGGG ATGAAGAAAA TTTAAATGTT GGTTTCATTA GCGATACGTT        960

GGCCGCGTTT GGCCGTTTCT TTACCAGTGC AGTGAATGAG GGTTGGTTGC GCAgCCGGTA       1020

TCTTGTGTGG CGTGACGTGC GCTCTGGAGC TGAGGTACAG CTTCAGCATG AGGAGGATGT       1080

CGCCGAGTTC TTGAGTACAT TTCCTTCCCC GGACACAGGT GTGTTTTGGT CGGGGGAGTA       1140

TGCGGCGAGT GTGGGATCTG TTCTTTCTCG GATGCAGGTG GGAAAGGTGG TGACGGTGTG       1200

GAATATCGGT TGCGGTGCGG GTCACGAAAG TTACAGTCTT GCGGTGCTTC TCAGAAAAAC       1260

CTTCCCCGAC GCGGTGGTTC GGGTGCACGC AAGCGATTCG GATCTCTTCT CCATTTCCAA       1320

TGCTCCCATG cTCACTGTTC CTGAgCATGT GATCGGTGAT TGGTATAAGC CCTATGTGGT       1380

GAAGGGGGTG AGTGGTTCAT ACACCTTCTC CCAGGAAATT AAGGAGATGG TCCTGTTTGA       1440

GTACCACGAT TGTACGCATC CGAGTGCGCT TCCAGACGTC GATCTTATCG TGGCGCGGGA       1500
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CGTACTGTCA TCTCTTGCGG TTCCAGTGCA GCACACCCTG TTGAAGGAGT TTTCTGAGAA    1560

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GGAGACGCCT CAGGGTAAGG TGGAAATTAA TGTTGCCATC CGCGACAAAG TATAAGAGGG    2160

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CgCTTGCGTG TGTGGATGGT TTCTTGAGGT TTTTGCCTTC GCGCGCGGAG TGCCCGTCTC    2700

TCTGCGTGCG TGTTTTCTGT GTGTGTGCCG CAAGAGGAGA AgTGGTGTCT CCCTCAGCCC    2760

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CGTCGTTCGT TGAACGTTGC AGAAGCCTCT CTTACCGTTT GCGATGAAGC TGGTATCCTT    3180

TCGCTCGATG TGCCAGAGAT TTTAATTAAA CGCAGACTCT ATCGTTCCGG GGAAAGTGAG    3240
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AATAAACCGG AGGAACGTCG CTACCTTTTT GAAGAAGCAG CaGGGGTGAC GCGCTTTAAA    3420

GTTCGTGGCG CGGAAGCAGC aCGGAAATTG GAGAAAACGG CGGAGAATTT GCGTCATCTT    3480

GAGGTTATTC TGCAAGAAGT AGAGAAGAGC TACGAGAGTT CAAAGCTCCA AGCTGCCCAG    3540

ACGCAACGTT ACCGCATGCT CAAAGAGGAG ATTTTTGCGC GAGATCGCGA TCTTGGTCTG    3600

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ACTTTATGGC GGTGGAGGAG TTTCAGGAGG TAAAGGAGCG CTACGAGTTT CTCGTTGCGC   5160

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TATTCCGTCG TCTGTTTGGG GGAGGTCGCG CAGAGATACG TCTTTCAGAT CCTGCAGCGG   5340

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GCATCAGAGC CTCCTCGTGA GGCGGAGGTG CAGGCTGAGC CTGAGCCGGC AGAGGATTCT   6600

CCACGCGCGA TGGTGCCTGA AGAAnCGACT GGAGGCATGA nGnnCCGCGC GTTTCGCnCG   6660

GATGACAGCT TGCATGGGGC AAAAACTTGA GGTTTTGTAT CCGGGGCGAA GTTGGGTGTA   6720

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AGTGGGCGAG CATACTGCGC ACCTGGTTTG CGCTATCACC AGnGCAATTG GAGGAGTCGC        6780

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GATGnGTTTC GGGGTG                                                        6856
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(2) INFORMATION FOR SEQ ID NO: 57:

     (i) SEQUENCE CHARACTERISTICS:
         (A) LENGTH: 10928 base pairs
         (B) TYPE: nucleic acid
         (C) STRANDEDNESS: double
         (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 57:

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AGCGGcTACG GGTCCTTGCT CGTCTACTCG AACGCTATGC ACCGCTTATC GGCGAGCAAA         180

AAATAACGGT ACgTTTCTTC GGTTATTGCG AGTCGCGGGT GCGTGATCTT CTCAATCAGG         240

CGCTTCCACG TGCTGTCCTG CGTTCTCTCA CCCCCTTTGA TAAGGCTGAG GCCTGGCGCG         300

CACAGTGCAG TGATGGGTTG ACTATTGAGA CGGAGGACGG GACGCTCCAG TGTCGGAGTA         360

CAATCGAGGA GATCTGCGCG CAACTTTTGT cTGAAAAGAG ACAGGAGTTG GCGTGTGCCC         420

TGTGCGGTAA TGGAGTGGTA GCGTGATCAA AGACGATGTG GTTACAGGCC GTGTAGTGAG         480

GGTGTCTGGT CCCATTGTGT ATGCCGAGGG CCTCTCTGCG TGCAGCgTAT ACGATGTTGT         540

CGACGTAGGg GAAGCATCGC TCATCGGAGA AATTATCCGG TTGGATGAGA GCAAGGCGgT         600

CGTGCAAGTA TACGAGGATG ACACAGGTAT GCGAGTCGGG GAGAAGGTGA CAAGCTTGCG         660

TCGACCACTC TCAGTCCGCT TAGGGCCTGG ATTAATCGGC ACCATTTATG ACGGTATTCA         720

GCGCCCACTT GAGCGCCTCT TCCAAGAAGA CGGCGCCTTC TTGCGTCCTG GTGCGCGTTC         780

ACAACCGCTT GATGGCTCCG TACGCTGGGA TTTTCGTCCT CATTGTAACG AGCGCGGTGA         840

GGCCCTGTGC GCGGGGATTC CGATTGCACC TGGGTCaGTG TTAGGGACCG TGCAGGAGAC         900

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GTTCAAGGGC GCAGGTGCTT ACACAATAGA TGAAGAAATT GGACGCACTG ATCTTGGTGA        1020

GCCGCTTTTT CTATCCCAGT ACTGGCCAGT GCGTCGTGCG CGTCCTTTCA GCAAAAAACT        1080

TGCAGTGTGT GAGCCACTAG TTACTGGACA GCGGGCGATT GATGTTTTCT TCCCCCTATC        1140

AAAGGGAGGA ACGGCGGCTA TTCCAGGGGG ATTTGGAACT GGGAAGACAA TGACGCAGCA        1200
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GCGCATGGAA GAAATGCcTG CGGAGGAGGG ATTCCCTGCG TACCTTCCGA CGCGTCTTGC        1560

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GGTAGTTTTC CCAGATCCGG TGGGGCTTTC GACAACAATG ACGTGATGGy kCGCGAcGCG 6420

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GTACTGATAC TGAGCGCGGT GGCTGTCTAC AACCGCATCT TCGACTGTAT CTGAGGTCTT      7020

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GGTGGAAAGT GCGTACAGCG ATAGTGGTTT TATTGGGTTG TGTTTGGTGA AAACCGACAC      7740

GCAAAACCCA ACTATCAGTG ATTTGTACGA GGTAGGATCG GTCGCTCGTA TTGTGAAGAA      7800

GATTAATCTG CCAGACGGTG GGTTAAATGT TTTTATTTCT ACACAAAAAC GTTTTCGCAT      7860

CCGCAAGCAC GTGCACCACA GCAAGCCTAT CGTAGCGGCA GTGCAGTACC TGTCCGATCT      7920

TATTGAGGGG GATCCACTCG AGATAAAGGC ACTTGTGCGT GGCCTTATTG GGGAAATGAA      7980

GGAGCTTTCT GAGAACAATC CACTTTTCTC AGAAGAAATG CGGCTGAATA TGATCAACAT      8040

TGATCACCCC GGCAAAATCG CCGATTTCAT CGCGAGTATC CTGAATATTT CAAAAGAAGA      8100

GCAGCAACGC ACGCTAGAGA TTCTGGATGt GCGCAAGCGC ATGGAGGAAG TCTTTGTATA     .8160
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TATCAAAAAA GAAAAAGACT TATTAGAAAT CCAGAGAAAA ATTCAAAATG ATTTGAACAG    8220

TCGGGTGGAG AAAAACCAAC GCGAGTATTT TCTGCGTGAA GAGCTGCGTT CCATCAAGGA    8280

AGAGCTGGGT CTTACCACCG ATCCAAAGGA GCGTGATCAG CGGAAGTTCC GTGCGCTAAT    8340

AGATTCGTTT CACTTTGAAG GGGAAGTGAA AGAGGCTGTG GAGAGCGAAT TGGAAAAGCT    8400

CTCCCTTACA GACCCGAATT CCCCTGAATA TTCaGTGGGT CGAACGTACC TCGAGACGGT    8460

GCTCTCTTTa CCTTGGcACG CTCCTGAGAA GGAGGAATaT GACTTAAAGA AAGCTCAGAA    8520

ACTGCTTGAT GAAGACCATT ATGGACTCGA GAATGTCAAA GAACGGATCG TGGAGTATTT    8580

GGCGGTGCGA AAGTTACGCG CCGATACCAA AGGCTCTATC ATCCTGCTGG TAGGTCCGCC    8640

GGGTGTGGGA AAAACCTCGG TGGGCAAGTC GATAGCGCGC GCCATCCACA AGCCCTTCTT    8700

CCGTTTCTCG GTTGGAGGGA TAAGCGATGA GGCCGAAATC AAGGGGCACA GACGTACTTA    8760

TATCGGCGCC CTGCCGGGTA AGGTGCTACA GGGGCTGAAA ATAGTAAAAA CTAAGGCTCC    8820

CGTGTTTATG ATCGACGAGG TGGACAAGAT TGGTTCTGGC GCGCGCGGCG ATCCTGCGGG    8880

GGCTCTGCTG GAGGTGCTTG ATCCGGAGCA GAACaCTACG TTCCGCGATC ATTACTTAGA    8940

TTTGCCCTTT GATCTCTCTC ATATCGTGTT CGTGCTCACT GCCAATAGCA CCGATCCTAT    9000

TCCCCGTCCA CTGCTGGATC GCGCTGAGAT TATCCGTCTT TCCGGTTATA TCGATACGGA    9060

AAAGGTTGAG ATCGCAAAGC GCCATCTGGT GCCAAAAACG CTGGAGAAGA ATGGTTTAAA    9120

GCGTGCGTGC GTCTCTTATC GGAAGGAGGT GTTGCTACAC CTGGTCCATT CTTATGCGCG    9180

GGAGTCTGGG GTACGGGGGC TAGAAAAAAG CCTTGACAAG CTGCATCGCA AGCTTGCCAC    9240

CGAGATCGTG TTAGGGAAGC GATCGTTTGA TGACAAGTGT TTGATGGATG AAGCTCTCAT    9300

AGGGACCTTT TTAGGGAAGC CCGTGTTCCG CGATGATATG CTCAAAGACG CGAACAAAGT    9360

TGGTACTGCG GTGGGTTTAG CCTGGACTGG CATGGGGGGA GACACGCTCC TTGTTGAGGC    9420

AATTACTATA CCAGGAAAAG CAAGTTTTAA GCTCACTGGG CAGATGGGAG CGGTTATGAA    9480

GGAATCCGCT TCTATTGCCT TGTCCcTGtG CGCCGTTACA GCGCGCAgCA GCGTATCnTT    9540

CGCCGAATTG GTTTGAAAAG CGCGCAATAC ATCTGCATAT CCCCGAGGGC GCAACCCCAA    9600

AGGACGGTCC GTCCGCGGGG ATTACCATGA CCACCACGCT CTTcTCGTTG CTCACCCAGC    9660

AGAAAGTAAA GCCTCGCCTA GCGATGACTG GAGAACTCTC ACTGACCGGA CAGGTGCTCC    9720

CCATCGGGGG ATTGAAGGAA AAGACTATCG CsCACGGCGC GGTGGTATCA AGGAGATCAT    9780

CATGCCAAAA GCGAATGTGC GGGATCTGGA CGAAATCCCC GAGCACGTCA AGAAGGGCAT    9840

gTGTTCCACC TAGTTGAATC GATGGAAGAG GTCCTTTCTC TCGCCTTCCC CAAGGGGAAG    9900
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CGTGTCCGTG CTGGCACTGC CGCCCAATCT GCTTCTCCTG AAAcCCTTAC AGGCTGACGT   9960

ATGCGCTTTC GTGCACGCGT ATCTCAGTCA ACTGCGAAgT GcGTCGTGTT CACAGGAGGC   10020

GGCACGGgAG GACACATTTT CCCGGGAATT GCAGTTTTTC AAGCgCTTGC gCAcrGGCGG   10080

cGGtGCGTGT CGTGTGGATT GGTGCAGCGC GTGGTGCTGA TCGCTCCATA GTGGAATCTG   10140

CCGGATTAGA GTTTTGTGGT ATCACCGCTG GCAAGTGGCG TCGGTACGCG AGTGTGCGCA   10200

ATTTTTTTGA TGTATTTCGA GTGCTCGTCG GTACGGTGCA ATCCTATTGT ATCTTGCGCG   10260

CTTTGCnCCC GCAGGCACTA TTTTCTAAGG GAGGGTTTGT GTCCGTGCCG CCGTGCATCG   10320

CAGCGTGGCT TTTGCGCATA CCCGTTGTCA CGCATGAATC GGATATCAGT CCAGGACTTG   10380

CCACACGCAT CAATGCGCGT TTCGCCGATC GTATTTTAGT CTCTTATCCG CACACGTCCT   10440

GTTATTTTCC CCgTGcGCGA CGCgcAGCAG TTCACTGCAC GGGGAATCCT GTGCGACAAG   10500

ATTTTTTTTC TGCACAGGCA GAGCGTGCAT ACCAGTTTTT ACGCATTGAC CAAAAAAAGC   10560

CATTGCTCAC AGTCCTCGGA GGAAGTAGCG GTGCGCGTGA CCTAAACGCG CGTGTTCTTT   10620

CATGTAGCAC CTTCCTTACC GAACGCTTCT ATCTTGTCCA TCAATTTGGC GCAGgCAACG   10680

AGGACCAAAT GCATACTATC ACCAATTCGC TTAGcGTCAA TGCTCGGCAT GCCTACATGT   10740

CGTTTCCTTT CATTCAGGgC ACATCTGCCC GATATACTCG CCGCGAGCGC ACTGGTACTC   10800

TCTCGTGgCT GGTGCGAACG CGGTGTGGGA GTGCGCATGC TCGGTAAACC AATGGATTCT   10860

TTTTCCTCTC GAACGAGGGA GTTCCCGTGG GGATCAGATT GAAAATGGCA GAATATTTTA   10920

GCGCACAC   10928

(2) INFORMATION FOR SEQ ID NO: 58:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3237 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 58:

TACAACGCCG TGAGCAACCC TGCACTCAAA AAGATCAAAG CAATAACATG GGGAGGAGCG   60

CCCATCGCTT TTAACATCGC AATTTCTTTA CGCCGTTCTG TCATTAGCAC CACCAGTACC   120

GAAGAGATGT GCACTGACGC TACTAGCACT ATCAAATACA TAATGAATAA CAATAACTTT   180

CGTGATGTTC GGAAAGAATG AAATTGCGAT CGATTCATGT CTTGCCACGT GTACGCACTA   240

AAATGGCTCG GTAATTGTTC GTGTACTTGC TCAATAAAAC GAGTCATCGC CTTAGCGTCA   300

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AACGCGTCGG CAGTTTTTAC CACAAAAGAA AGTAGCGCAG ATGCGGGGGA GAGAATTTTC    360

ATTCCCAGCG TGAGGGGGAT AAATACCCAC AACGCATCAA GCTCCTGATA TCCGCAAGAA    420

ACAATACCTC CTACCACCGC GCGCACCATT TTGGGGACCG CACGACCTGT CCCTCCTTGC    480

ACGAGGGTGA GTATCTGGCA CGTGTCCCCA CAGCGCACCC CAATGCGCTC AGCGATGCGT    540

TTTCCCAATA TTAACGTGTG TACTCCtGCG GCCTATCTAC CAGTTCAAGT GAACCTTCGA    600

CGGTTAAAAA TGGACGAAGT CcACGcTCAC TAGAAAAAAA ATCAGGGGGA ACTGCGCGGA    660

TATTCCCCCC TGCACGCCCT GTTTTTCCGA TTACAATACC ATCTCCCTGA AGGTGCATCC    720

ATCGTGAGTG ACAGTATGGG CCAAAGTCcT GCGCCATAAA TGCATTAAAT ATGCgctGCG    780

CGTCTTCATA TCGTTGCGTT GCCGTTTCAT TGGGAGCAAG CGGCAGTATA TCGATAAACT    840

GGAGGTGACC CGATCCGAGT TCAATCATCC GTGTGGTGAT CCCTTCAATC ATTCCATCAG    900

ACACCACAAG GACAACAATG AGTGGGATGA TGCTAATCCC GATGCCGAGC GCGGCACAGA    960

AAAAACTTTT GCGCAAAAAG GAACGTCGTT TTCCTGCTAC CGGAGTACCT GATAGAAAAG   1020

GTACTGGcGT AGGCAGTACG TGGTGCGCAT CACCGTGTAG AGATGGGGTG TGCCCATATC   1080

CTGcGCACAC TCCTGCGCAA CGTAATGCAC ACATGAAAAT AACTCGAATC AGATTCACCG   1140

CGGCGCACCT TTGTTTCATA TGCGTATCAA ACTTCCCTGC TGTAGCTGGT AACGGTAtCG   1200

GTCATCGATG CaATACGTGG GTCGTGCGTT ACAATGAGTA ACGTCTTTTG ATATTCCTCT   1260

GTCAGAGAGA ACAGCAGATC CTGCACTATC AAAGCGTTCT TGGGATCCAA ATTGCCAGTC   1320

GGTTCGTCCG CAAGAATTAG GGTGGGATCA TTGATCAGTG CACGCGCAAC TGCTGTCCGC   1380

TGTCTTTCTC CTCCTGACAT TTGTGCAGGA AAATGATGGG CGCGCTGCAC TACGCGTACT   1440

TTTTCTAGCA ATTCGTATGC GCGTGCACGC ACcTCACGGT AACTTTTTCC TGCGATAAGT   1500

CCAGGCAACA TGACATTTTC AAGCGCAGTA AAATCCCTCA GTAGATGATG AAATTGAAAA   1560

ACTAATCCTA AAAACTGTCT GCGGTATTCT GTCAGTGCGT GCTCATGCAA AGTGAGTACG   1620

TCGCATGAAA GCACTCTGAC GATCCCCGAA TCAGCGTGTT CCATTCCTCC AATAATATTC   1680

AGTAAGGTAC TTTTACCGCA GCCGGATTCT CCGGTGATTG CAACCTTCAC TGCACGCGGC   1740

ACGcTAAATG ATACGTCAGA CAAAATCTGT ATACGTTCTG TTGCGCAgCa GAAnGCTTTT   1800

ACTTACTTGT TCGACAGAAA GAATTGGGTC AtTCATCGCG TAGCACCTCA GCCgGCTTGA   1860

GCaGGAGTAT TTTACGCGTG GCAAGGTACG TTGCAACAGA CGCAGAACCT GTGCCAAACA   1920

GAAATACAAA CAGTACCTCC TGAAAGAAAA TCTGCACGGG AATACGCTCC ACGTTGTAAA   1980

AATATTGCGT ACCAAACACA CTGAAAGAAG GGGTTTTCGT TCCCGAGAAG AGGGAGAACA   2040
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GGAAAAACGC AGAATTTACA GCAGTCTCAA TGCACGCAAT TATTTCGTTA ACGTGGATAG   2100

TAATGAGCAA TCCCAGGAGT ACCCCCAAGA GAGAGCCCAA AAAGCCAATC ATAATGCCAT   2160

TGCCGATGAA CAGAATCTGC ACGTGACTGA CAGGGGCGCC AAGTGAAACG AGCATAGCAA   2220

TTTCTTCCTT TCGAGTGCGA ATAGAGCGGC GCATGCTGTG ATAAATGTTT ACGGTTACCA   2280

CCwTAAAAtC AAAtGACAAG AAGTATCATG ACGTTCTTCT CTATGCGGAG CGCACTAAAA   2340

AAaGCaCGGT TGTACTCCCG cCAGGATTCT GCCtTGAGAT scAGGAATGT GTTGTGCaAG   2400

AAAGAAAAGG TAGCGATCGT CTCGCTCATG GTTATTTAGT TTGACTGCCG CGGTAATATC   2460

aGGCGTCGTA CCAAATAAAG TGGTGCCCAT GTCCAGAGGA ATGTACGCAA ACGTGGAATC   2520

TACTTCGTGG TATCCCGATT TGAAAATGCC CGTTACCGTA AGTTATTCC AGCCTGGCAT   2580

TATCTTTTGT GTATCACTTC CTGACAGGGC AAGCGTGTCA ACCTGATCTC CGGTACGTAC   2640

CGAAAGGTGG CGCGCCAGTT CATATCCGAG CACAATGGAG TGCTTTTTAC TCAAATTAAA   2700

ACTTCCGGAT GTTATCGGGA GTGCACGCGC CAGCAACCTA TCCCGATGGA AGATATCTGC   2760

AGGAACTGCA CGCACAAGCG CACCGTGTTG CCGATAATAG TTGCCTTGCA ATAAGGCATG   2820

CGCTTCTATA AATGGATAAA AGGATTGATA GcCGCCTAAC GTCTCTGCAC GTTTTAtGCG   2880

TCAACACTGC CATATACACG AACGTGTGCA GAACTCACCT GTAAATGGT GCCAATAAAA   2940

CCCTGCTGGA AGCCGTTCAT AACCGAAAGG ATGACAATTA AGGTAAGTGC CCCAAAGGCA   3000

ATGCCTAATA TAAAAAAAAG ACTGGTAATC GCGTTyGCAC TCCGCGCGCG CACTGAATTT   3060

AATCTGCGCA CCATAAAACA CATCCACCGc AGCGTTTGCA CGTGGGTGTT ACTCATCGTG   3120

TACTTCCTTt GTAGAGTAAA TTTCCTTCCC ACGCTCAAAT ACCTGCACGT CCTGCGCACC   3180

TTCCTTTTGG TGAATTATTG CCTGTAATAC nCCGTTGCGA TAACGTTTTT CTAACAC   3237

(2) INFORMATION FOR SEQ ID NO: 59:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2582 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 59:

GTCGTATCCG nGnTAGTCCA CCGGTTCCTG AAAACACCTG CTGCGCTGCA CGGACACCAC   60

CTTTCCCCCA AGTTCATCCA AAACAGGGTC GCAAACCGCT GCGAGTTGAA AAGCTCGACG   120

CGTTGCTGCA CACGTAATCT CATAAATATT GCCCTGAAAC TCAATCAACT GCTGCATTGG   180

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GAAAATCATG GGTCATCGTA ACACCTATCG CGCCGCGCAA CAAGCACTGC TTGACGTACA      240

CGATCCCCCC TGTGTAGAAT GCGCACCGCG GGCAATGGCG CAGTAGGTTA GCGTACAAGT      300

CTGGGGGACT TGGGGTCCCC GGTTCGAGTC CGGGTTGCCC GAGGAACAGC TGGCCAGCTC      360

ACCCCGGTAG GCCGTTTGTG TCTTTGGGAA GCGGCGTGCC CGGCTGCGTC TCGCCTGTAG      420

GTTGTAGCTT CCGTAGTGCG TTCTTAGGCA GGTGTGTAAG GAATGGCGGG GCTAGTAGGC      480

ACTCAGGGTC TATCGGCGTG CTATTTATCC GTGCTTCCCA GTGTACGTGA GGCCCGGTGG      540

AGAACCCGGT GGTTCCGCTG CGTGCAATGA GCGTGCCCGT TGACACGTAC GTATCTTTTT      600

TCACCAGCAG CTCGTTCAGA TGGTAGTACG CTGTGTACAG CCCCGGGGCG TGCTCCAGTA      660

CCACGCTCCA AmCCGTGGTT GTCCGTTGCT CTGCGAGTAA CmACCtCCCT GTACnTGcTG      720

cATACAmCGC CGTTCCCACc GGAACTCCAA AGTCCTTCCC CCAGTGGTAC CTGnCAGAGC      780

GCGTCCCGTC GGTGTACACA AAGACGCGCG CnTGCCCAAA CACGACGTAC ACCGTCGAGA      840

TTCCACCGGT TGTCGAAACG GCCCTAAAAA GGCCCGAGTC TGAGGGGAGn TCACGGTCTC      900

nGGAnGCCTT ACAGGsGTCA CGCTGCACCT TTTTGCGCTC ACTCTTGTCC TGCGCAATGG      960

CGGTATTCTT gCGATCTAAG CGTAATTCCT CACGGGGAAA TTCCTTTTTC TCAATGCGCA     1020

GCGGCGCACG CCGCACATAT GGCTTCCCTC CCGGCACACG CACCTGCGCT TCAAGCATCC     1080

AATCCCCCGG TTCCCAGAAA ATCGATATCC CCAGCAAGGC AACGTGCGTC ACATCCTGAG     1140

AACCTGCACG CGAGACGCCA GCGGTTGCCG CGTCCGTCCC TAACTGAGCA ATACCCTTTG     1200

GGGGAAGCGC AAAAGCGCGC ACCGTCTTTG CTTCTTTACC CGCAGGGGTA CGCAGCACCA     1260

GATGTACCTC AGTATGCGCC TTGTCCTTTT CTTGCAATGC CACTAAAGAA AAAGTGGCCA     1320

TCGCACACGC ACCTTGGGAT ACCTGACGCG GGAACTGCAT AGCGATACGC TCGAAATGTG     1380

CAGGAACCAC CTGACGCTCC GGCGGcGGCA CCGCAGcCGA ATGAAGCAGG AAGGACACCG     1440

CGCTGACAAA GACACCAGAG AACAAGAGTA cTTCGCACAG ACCACGCACC CAACGAACAC     1500

TTCTTTTCAC CGACGGTGAC TGCACGCCCT GCGTCTGCAC TGCCCTTTTA GCGTTCACCC     1560

CCGGTGCGCG TCCTACTCTC TCTGCACCCA TCACTCACTC CTCCACAAAT CTTGAATGAC     1620

CAGCTGCGGT GTGCACGTTC CCTGAAACGT GTTACGCGTC ACTTGAAAAA CCGCGTCAAC     1680

TACATCCCCC ACTGCAAACT CCTGTGCCAA CTTTTCCCCT GCTCCCCAGT AAATTGCGGG     1740

CCATTTATGC ACCTGTGCAT CCAAGGTCAA TTTTACGTGC ACACGTTCTG TACGCCCAAA     1800

AAGCGATGCA GAAAAAATTT TCAATCTCTT CGCCAAAAAG CACAACGGGG GATTGCCTTC     1860

TCCGTACGGC TCAAAGCGAT CGACAAGGGT CAAAAGCCCC CGCGTCATCT GCGTAGCATg     1920
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cCAGTTCTGC ATCAAATTCT CCACACTCTT GCGCGCTTTC ATCAGCAAAC TCAATGGTTG   1980

CCGCATACAG TTCCATACGG TGCAATAGCT GGGGAATTCG CTCAGAGGGA ATTGAAAAAC   2040

CCGCCGCAAA TGCATGCCCC CCATAGTCAG AGAACAAGTC TGCAAGGGGA TCTAAGAGCG   2100

AAAATAGGTG ATATCCCCGC GCCGAACGCA ACGATCCTAC CGCGTGCCCG TCTGCCATTA   2160

TACAAATGAT CACACAAGGC ACGCGCAGCC TnCGcTCAAA CAGTTTGCAA GAATCCCCGT   2220

AACGCCCCGA TGAATCTTAT CGCTACAAAC CACTGCCAGG CGGTTGCTGT ACGTCTCAAG   2280

ACTTGcACGC GCAAGAGGCT CAACAAGTGC ACGAGCACTC CTTCCTAACT TTTTTCGCTG   2340

TTCGTTCAAT TGCACCATTT TTCGTGCCTG cAGCGCGCGC TGCGAAgTTT CGCGCATTAA   2400

AAACAGTTCC ACTGCACGGT GCGGACACCC TAACCGCCCC GTTGCATTGA TAAGCGGCAC   2460

AATACTCCAC CCTAnCTCTA CGGTTCCTAA CTTCTTCCCC ATGAGACGCT GTATCGcAAA   2520

CAAcTcACGC AAACCCACAC GTGGACGGCC TCATTCATCG CCTGCAGACC GTAGCGGACC   2580

AT   2582

(2) INFORMATION FOR SEQ ID NO: 60:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 5504 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 60:

CAAACAGATC AGCGGGAGAA ACGTCTGGCA ATTnTAGCGC GCGCGCATCG GCAGGAAGAG   60

ATGGCGGCAG CCCCGGTTTA TCTGCCACAA GCACACAGCG CACCAAGCCC CCGCGACGAG   120

CAAGACAAAG CGTCTGCAAC TCATCGGGCA AGCAGCGGTA TGAACGCTCA GAAAGCTCCA   180

CGGGGATAAG ATGTATCCCC CGCTGTGCGA GTGCCCTCAC ATCTGCCGGA TCGAAATCCC   240

CCCACGGCTC ACAGCGTTCC AGATGCGCAA TGCACTGCGC AATGCGCTGA GCAAGTTCCA   300

CGCGGTCTGA ATGAGTACGT ACGATCTGTT CCACGGCCTC TGCTGCTTCT ACCACCTGAC   360

CTGCAACGCG ACACTCCTCT CCTCGGGTAA CATTCTTTGT CTGAGCGTCA GTGACGAGCG   420

CAATGGCCTG CACGCACCGA GCGTCCAACG CGTgCAACTC TGCAAGTTGC TCACTTGCAC   480

ACTCCCGCAA CTGCACATGC ACAGCACCAA AGGAACGCAA CGCCTGcAGC GAACGCTCTT   540

GCTCAGAACC GAGCACCAGA AGCGTTACCT TTTTCATAGG AACTATCACC GTGTATCCTC   600

TTGTTCCATC CGACTCACGT CTACCAGATT CTTCTTAGAC ATCTTCCCCC GCACTACTGC   660

520

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AGCAACCTGC TGATCACCGA GGTACACCGT TATTTtCCGT ATGCATGCCC GCGTCTCAGG          720

AATCTTAACT TTTTCAAAGA GGTTAACACG CTGCGTTGTA GTCCGCAACT CTGcACCCAG          780

GAGAAGCGCC TGTTCGTCGA GAACATGCGC CTCCAAGTCT AAGCTTAGCA CTTCCTGCAT          840

TTTGCGCACT GCAGTATCCA CCCACAGAGG AACACGATAT AAGTCATAGG GAGGACAAGC          900

AAAGTGCACT TCTAAAAAGC AGGGAATACG CACACCTGCA ATGCTAGCAT ACGTTTTCTT          960

TACCTCTTGC ACGCGGAGCA AACGCGCGTC GAACACACCG CTTTCAGAAA AAACTGCAAC         1020

CCACTGCTGA ACATCCTGAC GCAGGGCATC TGCACGGGAA CGTACTTCAG AAGCGCGCGC         1080

CTCAACGGCA CGGATCTCAG CATACAACTG CTGCTTTTTA AGCTGAAGCG TAGGGAGAAA         1140

ACGGCGAAAC GTCTTGAGCG TCTCTTTTTG ACGTTTCAGT TCATTTTTGG TTAAGCGCAC         1200

CGCCAtCGGT CACCACCCTA CGCAGGCCAA TACGTGTTAA TCAAATCAGA GCGAATCCCC         1260

GTCTCCTCTG GGGTGAAACA CCGGCCCAGA ATTTTCCACC CCGTATCGAA CGCCTCTTCA         1320

AGCGGAATAT TCACCGAAAG ATCCATGAGc TGCGCTTCAA ACAGCCCACC GTATGTGAGC         1380

AGTTTCTCAT CCCACTCGCT CATGGCAAAA CCCATAGATC TTTTCTCAAG CGCATCACGA         1440

TAGGCGGCAT ACAACTTAAT CATATTATCC ATAAGCGCGC GATGATCTGC ACGCGTACGC         1500

CCGTTTACGT TCTGCTTAAG ACGGGATAGA CTCCCGAAAG gTTCAATGCG CCCGTTCTtC         1560

AGATAAAACT GaCCCTCAGT AATGTACCCC GTGTTATCAG GAACCGGATG CGTAACATCA         1620

TCCCCTGGCA TGGTGGTAAC GGCAAGGATA GTCACTGACC CTGcATCATC AAAATCGACC         1680

GCCTTTTCAT AGCGCGACGC AAGCTGGCTG TACAAGTCAc CCGGATACCC ACGATTCGAG         1740

GGAACTTGTT CCTGAaTAaT CGCAaTTTCC TTCATAGCAT CAGCAAAaTT AGTCATGTCG         1800

GTTAAGAGCA CCAACACATC CCTACCCTTC AAGGCAAACT GCTCGGCAAC TGCAAGaCAC         1860

ATATCAGGGA CCATCAAACA TTCTACGGTA GGATCTGAGG CAGTGTGCAC GAACAGGACT         1920

GCCCTACTCA ACGCTCCTGC CTCTTCCAAT GCACTTTTAA AATACAGGTA ATCGTCATGC         1980

TTCAGCCCCA TACCCCCGAG GACGATGACA TCAACCTCCG CTTGCATTGC AATACGGGCC         2040

AGCAGTTCGT TGTACGGTTC CCCTGAGCTA GAAAAAATAG GCAACTTCTG AGAAACAACC         2100

AGCGTATTAA ACACATCAAT CATGGGAATA CCCGTGCGAA TCATACGCCG CGCGATAACC         2160

CTCTTTGCCG GATTAACCGA AGGACCGCCA ATTTCCACCC TCCCTTCCTT TAAGGCCGGA         2220

CCACCGTCTC GGGGAACGCC AGAGCCATTA AAAATTCTCC CCAATAAATA ATCTGAGAAA         2280

CTCACGAGCA TACCCCTCCC CAGAAAGCGC ACCTCGCTCC CGGTGGAAAT ACCCCGGCCT         2340

CCCGCAAACA CCTGcAGGGA AACTACATCC CCTTCAAGCT TATTCACCTC AGCAAGCGAA         2400
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TCGCCAAACG CCGTTTTTAC CCGGGCCAAT TCCCCGTAAT GCACCCCCTT TGCCCGCACC        2460

GTGATGACAG AACCGTTGAT CGACTCAATC TTCTCGTACA CCTTGTACAT CGTCTACTCC        2520

ATCCCCCGTA TAATTCCCTC TGcTTCGCTG TCGATTTTCG TCGATTCTCC CTGGAGAAAG        2580

GCACGTATCT CCTTTTCTTT CTCCACAAAC GCCTCAGAAT TCCAGGCGCA ACAGTTGTAA        2640

TCGATAAACA TATGCCCAAG CTTGCTGAAG TATGCCCGCG CGTCATCTTT TGATTCAAAC        2700

GCTAAAACAC TGCCAAGAAC CCGCATGACG ATGGCATAGC AGTGCTTTTG ACGTGCAACA        2760

GGTACTGCAC TATCGACTGT GTCAAAAGAA TTCTGCTGCA GATACACCGA ATCAAGAAAC        2820

GAGCCTTTCA GATATACGAG AAAGTCCTCC ATACTTGTGC CCTCTTCGCC GACGACCCTC        2880

ATCATCTGCT CCACCTCTGC CCCACGGCGC AGAAAAGAGC GACCGTACGC AACAGCCCGC        2940

GCGTCAAGCA CACTTGGATA CTTAGACCAT GAATCAAGCG GATGCACCGC AGgATACCTG        3000

CGCGCGTCAG AGCgyTnCTC GAGAAAGTCC GTGAAAgCCC CAACCACTTT CAATGTAGCC        3060

TGCGTTACCG GTTCTTCGAA ATTACCACCT GcCGGAGAAA CCGTCCCTCC AATAGTTACC        3120

GATCCTTTCT CTCCACTCCT CAGCCGGACC ACACCAGCCC GCTCATAAAA GGCTGCGATA        3180

CAAGACTCCA GGTACGCAGG AAAGGCCTCC TCCCCCGGAA TCTCTTCCAA ACGCCCAGAC        3240

ATTTCACGCA GGGCCTGTGC CCAACGGCTC GTAGAtCCGC CAGCAAAAGA ACATCCAACC        3300

CCATCTGACG GTAATATTCT GCAAGCGTCA CTCCCGTGTA CACTGAAGCC TCACGAGAGG        3360

CAACGGGCAT AGAAGAAGTG TTGCACACTA TAACCGTCCG CTCCATAAGC GACCGACCAG        3420

TGCGAGGATC CGTAAGATCA GGAAACTCCC GCAGgTtCTC AACCACCTCC CCTGCACGCT        3480

CCCCACACGC AGCAATCACT ACCACGTCCA CATCCGCATT GCGACTGGTA GAATGCTGCA        3540

GCACCGTCTT TCCCGCACCA AAGGGACCGG GAATACAGTA CGTCCCCCCC TTGGCCACCG        3600

GGAAAAAGGT ATCTATCGTC CTAATGCTCG TTACCAATGG CTCAGTCGGT TTCAAAcGCT        3660

CTGcGTAACA ATGGACGGGT CGCTTCACTG GCCAACGAAA TGCCATGGTC AGTTCGTGCT        3720

CATGTCCCTG CGCGTCACGG ACCCGCGCAA TCACATCGTG CACGCGGTAC GTCCCTGCAG        3780

TCTGAATGAA GACAACCTCA TAGGAATCCC CCATATGAAA GGGAACCATA ATGCGGTGTT        3840

TGAGCGCACC CTCTGGGGTA TACCCGAGCA CGTCCCCACG CACCACGCGC TCACCCACTG        3900

AAACATGCGG GGTAAACATC CATTCACTTG TCCGAGAGAG GGCGGGCAAA TACACCCCGC        3960

GCTCCAAGAA ATACCCAACC TTTTCTGCAA GCAGCGGCAA CGGATTCTGT AAACCGTCGT        4020

ACACCTGACC GAGCAAACCA GGACCTAGCT CAACAGACAG CAAATCGCCT GTAAACTCAA        4080

CACGGTCCCC AACGGAAACC CCTCTTGTGA TCTCAAACAC TTGCAACTGT GCCTCACGAC        4140
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CACGAACACG AATAATCTCC GCTTTCAAAC GCGCATTTCC AACATGCACG TATCCGACCT   4200

CGTTGAGCGA AACGACACCC TCGAACGTAA CGCTCACCAT ATTGCCGTTG ACCGCAGACA   4260

CGATACCcTT CGTTTGCGTC ATGTATATGC TCCAAGAATT GTATAATAAA GAGCTGCGTA   4320

TGCTTTGGAC CCCGCCTGCA TTGTGAAACG CGACCGATGC GTAAGCAACA TCAGCTGCAG   4380

CCCGTACAAA AACACTGCCT CTGAGGAAAA CGGGTCAAGC GGCCTACACC CCTCGACAAA   4440

GGAAAAGCGC GCGTCGTTCA AAAAATACTC CGCTTCGAGC GGATCGTCCA AAGAGACCGC   4500

AACACGAGCC GCACGAGCCA CCGACTCCTG CGCCACAGGA CACTGCCTTA CTTCAACAGG   4560

AGTATCCCAC CGCAGACGGT cCgcGCGCTC ACgcgCAAGc GCACAGCGTA ACGCGTACTC   4620

AAACTCGCCC CATCTATCTA AAACACGCGA TCCCGTGGAG TCACGCGCCG GCACGGGACA   4680

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CAAAAAATCC TGATAACGCA AAGGAGGCAC CGCGCCGCAT AGAAGAGATG GTAGCTGCGT   4800

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CGACCCGCCC TCGGCAGGGA CTATCCTAAA CCCTGCCGTA AGGCAATCGT CAGACCTCAA   4980

CTCTACCCCT GCCGAAAGCT GCTCCTGCAA CGCAsCACAA AACACCCCCT CAAGCGTCCG   5040

AAGATCAGCA GGAGAGAGGA TGAGCTCTAG CTTATCACCC TCCGCTTGAA CCCAGGCAGA   5100

AACGACACGA GGAATAAGtc ACGCAAAACA CCCGCATCGT aGtTGCGCCG TCTCCATCGA   5160

AATAATAGCC CGAAGAGAGC GAGTCACCGA ATCTTGAAAG GATAATAAAA CGTTGCGACT   5220

CGCCTGCGAC AGGCCGCAAG AGACGACGAC TCGATCCGCT CTGCCTCCTC ACGCGCAGCG   5280

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(2) INFORMATION FOR SEQ ID NO: 61:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 8467 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 61:

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CGATGCACAC CCGCAGTACG GTAACAATGC GGGCCTTGcT GCGCGAGTCG GTCTTAGGCA    1740
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TCAGTGTCCA CTTCACAAAG ATAACGCCCT ATAGCGTATA CTAGTAGCAC GCACCGAGTC      7380

CTGACCGCTA CCCGCGTGCG AGCAGACGGT TCACCCGCTT CACAAAATCA ACCGACGAAC      7440

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CTGTGTA                                                               8467
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(2) INFORMATION FOR SEQ ID NO: 62:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4354 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 62:

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AACAGCTTTA TTAAATCTTT GACGTACAGC ACACCCACCA CATTATCAAT AGTTTGTTCG     240

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CTACGAGATT TATGAGCAAC CTGCGACTGA CTTTGTCGCT AAGTTTATTG GGGAAACTAA     4260

TAGCTTCCTG TCAACTGTCG TCTCCTGCAC CnCCATTGAA AACGAAGAGT TTATGCTCAG     4320

TCTCCAGGTT CCGGAACTTG ACCnTACGCT CACC                                4354
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(2) INFORMATION FOR SEQ ID NO: 63:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 21948 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 63:

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GATACTTCCC AATGGCACTT TcsGGTCGCt GcTTTTtCyT CACgTTaACA GCGAACGTAT       60

TGATTTTAaT ATCCACCTGC CAAAAgGAGG TTCAtTACAG GACTATGCTC ACATCCGCmA      120

CACACTCAGC CGCAGCGTTG CGCACTTCTA CCGTCAGTGC ACTATTGCTC ATACGTACGT      180

GCAGAACTGC CCACGCACtG CCACTCAGGG CAACGCGCCA ACACATTCCT CACCCCCCTG      240

CACCGGCGTA CGAGAAGAAC CCGCCGCTCC cTGCGCGCAC ACACCCCGGT ACGAATCCCT      300
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GTTCCCTCTA CCCGTGCAGC ATGCGCACCT GCTTCCTCCG TCACCTCCTC ACATCTCGTG    360

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CAACCATACC CATACAGGTG CATTCAAAGT ACTCGGACAG GTAGCAGGAA CATTCATCGC    480

CGTAGAACGC AACAACGCTC TCTACCTTAT CGATCAGCAC GCAGCACATG AACGCATTAT    540

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TCACCCACGC TCGGATGAAG AGGCGCGCAT CATGCACCGC GCCTGCACAG AACTTTCTCC    660

TGCAGGATTT CGATTTCACG AAGAACCAGA CGGTTCGTGG CACGTAACTG CGGTGCCGCT    720

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CACCATCCTG GATGACGCAA CGCTCCACTC GTTAGTGGAG CAGGCTTTTG CATTACCACA    900

ATCGAGGTGT CCCCACGGAC GGCCCATTTG GATTGTCATT GGCCGAGACG AATTGTTCAA    960

ACGGATCAAG CGCACGTAAC GCGCTGCAGA TACGCAAAAA GAAGCCTGCT ACGTCTGCGC   1020

TCTCCGCGTC GGCACGGGGA GGTGCGCCGT GTGCACACAA ACACCACCAG TGAGAGGATG   1080

TACGGCAGCG CAAACAGTAC ACCGGTGGGC ACCACGTGAG TGCCCTGCAA TAmGTcaCAC   1140

ATGTGTTCAA TACCGGAGAA AAAAATCGCC GCCGGCACAC ACCACATCAT CCGCTTGCGT   1200

GCAAGAAAAA CAATTGCAAG TGCCGTCCAT CCTCTGCCTG CAGCCATCTG CGGGGTGTAg   1260

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GCGCGATGTA ATATTGCTAT CACTGTGGTG CCTATCACTC CCATCGAGAC CGCCTATGAT   1920

GTGTATCATG TACAGAAAGC GCATGACGTC TGCGAGTTCT GTGCTTTTCC CCACGAAAAC   1980

AAAAAACGGT GACAAGGAAT CGATATACCC GGCGTGCGCC TCGCCGCACT GCATTCCACG   2040
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TTACCGTCAG gTGCGCACCA AGTACTGCAG CTTCAGAGGC TGTCTCCATC CACGCGAAAA    2160

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AAAAAAATCC GGTAAGCCCA AACAGCGCCC CTGAAAGCAC CATTCCCCAC ACATAGGTGG    2340

CCCATACGGG AAACCCTACA AAACGCCCAA ATTCGGGGGC CTTTCCGCAT ATGCGAAACT    2400

GATATCCTAC GCGGGTGTAC GAAAAAAAAC ACCCAACTGC GAGTGCTACT AAGGACGCAT    2460

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CGACTATCCC TATGATAGCA GATGCGGCCA CAGAAAACGA AATATCTGTG AGCGGAACGT    3720

CTGCGTGTTT ACTCACCTGC AGCGACTCAA CGCGCAACAC CCAAGGACGA GCAGAAGATG    3780
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CCCCTTCTAT CAAAGAAATA CGCTGTGCCC ATCGCAATGC ATCAGCAAAT CGGTGCGTCA    4020

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CACGCTCAAC ACCGTCACAC AACATTGCAT ACACAGGACT GTCGTGACGA AAACCTGGGA     5700

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GAACATGACG ATATCATTCC TCTGATCACC AAACACGCAT ACTTGTTCCA AAGAAATGCC   12480
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GCCCGAAATA AAGGCCCTAT CCTTCTCTAG GAGTGGCGCA AGGTTTTTCA GATAAAAGAT   15960

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GCGGCATCAG GGGCACAACT GAGCCCCCCC AAGGTGnGnG CCCTGTnG                  21948
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(2) INFORMATION FOR SEQ ID NO: 64:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 13518 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 64:

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AACCACGTTC ACGCCGACTG GGTTTTGTTT CGGGTGCGCG CGCGACTGCG GkTTTTCGGA      300

AGGkTkTGGC GCAGACGGkT TATCCAGATG AGATGTTTCG TAGGGATTGG CCAGGGAGAG      360

CAGGAsCCcT GCGTTCACCT TCGTGTTACy TAsCCGAAGG GAAAAGGAAC TGCGCAyTAC      420

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AACACCTGCA ACGAGGAGCA GGACCCGCGC AATACGTGCT CCTGCACTGT ACAGGTCATT      540

GGGAATTCCC TGGCTGAAGG CGACAAGGCG CGGCAACTCC GTGAGACACA CCACTGAACT      600
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GAGmaCCACC TGTTTCCTTG TTGCGCAAGG GAACAGGTGG TGGTAGGTTT GCGCGGTGGG      900

TACCTTGTAC GTGGTAGCAA CGCCGATTGG AAACTTGGCA GACATCACCC TCCGTGCCTT      960

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AGCCGAGTGC GGGGTGGAGT GCGTGTAGCT CGATAGAGGG CTCCGTGAAC GGAAAGTACC     2340
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CTGCTCCAGA TGCAGAGGGG GCGGCCGGTT TTGATGAGTT TCCTATAGGC GAGGATCGGG    5520

ATGTGGGGCC CTTGCATGTG GGArGGGTGT ATTTTCAGCC GGTTGAGATG CATCCGGCTC    5580

CAGGAGCACA GCCGTCGAAG GAAGAGGCGG ACTGTCACAT AGAAGCGGAT ATCCACGCAA    5640

ATGAGGCGGG TAAAGATTTA GGGTATGGAG TCGGGGATTT TGTGCCGTAT CTCCGAGTTG    5700

TTGCTTTCCT CCAGAAGCAT GGCTCTGAGA AGGTGCAAAA GGTGATGTTT GCGCCCATGA    5760

ACGCAGGGaC GGTCCGCATT ATGGGGCGAA CGTGAAGTTT GAAGAGGGGC TTGGTACGTA    5820
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CAAGGTACGT TTCGAGATCG CTGCACCCTC GCATGATGAG TACTCGCTAC ATATTGATGA    5880

GCAAACTGGG GTTTCCGGAA GGTTCTGGAG CGAGCCATTA GTTGCAGAGT GGGATGATTT    5940

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GGGCGTTCTT TGTTCAGTAA GACAGGCGGG TAGTGCAGTG CGTGGCGCTG CTCGCCGGGT    6060

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CTTCTGTCTC CGTGGGGTTG TGCGGTGTAC AGAACGGGGG GGGGTGTCGT GAGTGCGGGT    6180

ATGAAAGTCT TGGTGTACGC GGTGGCGCTG GGGTTCGGGT GCGGGGGTGT GGTGCACATG    6240

CGGGAGGGGG ACACCTACCA ACAACTCCTC GAGCACCGCA TTGCAAATGG TCGGGAGTTT    6300

TCGCGGGTGT TTGCgCAGGC ACAGGTTGAC GAAGCTGAGC ACAATGAAGT TCGGACAAAG    6360

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CAGGTGCGCG CAAGTTTGGA GTTGGTGCGC GCGCGGTTGC GTTTTGAGTC AGTAAAGAGA    6780

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GGTATCATCG GAAGGCTGGA GTACGAGGCA GCGCGTTCGG AGTATCTTCT GGCGCTTGCT    7560
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TGTGCGCGGC GCGGCGTATG CGCAGGGCGG CAATTGCCGC GTGCTGTGTG TTCGCGCGCG    7920

GTGCGGCGGC CAATCCGTAC CAGCAGCTAT TGCGCCACCG CCTGGAAGCG TTGCGGCCGG    7980

GTGCCCGCGC GCAAATAGAG TTTGATGTGG CGCACTGTGG GTATGAGAAG GCgCGtTGCG    8040

CTcAGCAGGT ACGTACGTGT TGGGCAGTGA GCTTGAAATC AGAGGACACT CgGCGGGGGA    8100

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ACCGCCTTGc GCACGCGCGA GGCgCTGCGT TTAGATCTTG CCaAGGTGGa rCgCGCCcgG    9180

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AgcTGCGTGC GGCGTGCGCG AAGTTGCATA TGTTGCGTTT TAATCTGGGA GTGGTACGCG    9300
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CTTTTTATAA CCTGACCACC CATTTTGGTA TGACGGTAAC GCAGCCGAAC GGTGCCGCCG      9780

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GCATTGATTT GTACTCGTCG GTGCGTCGCA GCCATGTGTT TGCGGTGAAC ACCAAGTACG      9900

ArGsmnTGCG TGATGCGCAA GAAGCGCTCG CCTGTGAGCC GCACGTAAGT GAGAAGCAGG      9960

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CGCAAGACGC GTTTGACGGA GAGTACCGGG ATTTTATCAT CTCTGCTGGT CAGGAATTTT     10200

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GTCTCTGGAC TGGCATCCGT TTGAAATCCG GTACGCGCAT TTGCGAGGAA AAAATCAGCG     10560

CCTGCACGAT GCGTTAGGGG CACGGGAGTA TGCACAGAAA AAGGAGCAGC AGGAGAAAGT     10620

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GCGCTCTGTG TGGGGCGCTT GCCGCCTTGG TGCCAGCAGT CGGTGCGCAG GAACAGGCAG     11040
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CGAAATTGCC GCGAACAATT ACGACATTGC GTTGGTAAAG TCCATCGTGG ATCTGAGGAT   11340

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TCTGGGGCTG GGGGGCGG   13518

(2) INFORMATION FOR SEQ ID NO: 65:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4448 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 65:

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CCAAAGACTG AAGCGCCTTT GCGTTCTTCT TCCCTACGGA CCGTCCGCAA CCGGCTCCTG   240

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GACGCCTTAT ACCGCCGTCA CCGTCACTCC GCGCGGAATT ATGGTGCAAA CAAAAGAGAA   540

AGGTATGGCC CTATTGCACA CACGGACGCT CGCCGACGCG CTACCCAGAA CATGAGCAGA   600

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AAGAACGCGA ATCAGAAAAT TGTGTGGCCG CTTACGACGA AACTCATCGG TATTATCAGC    660

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CCGCGCATCG GCTACATCGG AGTCGGCGGT GTAGCCGAGC TGTGGAACGG TGACTTCTTC    960

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GAAAACGAGA ACCACTGAAT GTGTACGCTG CTATCAATCT AAAGGGGCAT GACGGACCGC   2340
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GCATTCTGCA CCCCACCTTT GTCCCTCTCC TACCCGACCA AGATGCACTT CTCCTGACTG      3060

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GGCAGGAA   4448

(2) INFORMATION FOR SEQ ID NO: 66:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 3219 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 66:

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GATTCTGGCG CGCAGGcAaC AAGCGGTGCA TAACGCGCTG AGATATCCTC ATCCGACCCC   960

GCACGCGCAA GACGGGTTAA ATCCGCAAGA TCACGCTCAG CACTCTGCAC AGCGTACTCT   1020

TTTATCTGCT CGCGCGAGCT GAGCGCACGC TGCCGCGTTT GTGCGTCGGT CAGAAAATAC   1080

CACTGGAGTG TAGGGAACAA AAACCCAGAG CACGCAGCAA GAACAACAAG CACGACCCCA   1140

AACCGAGCCT TCTTACTCAC CTGGCGATCT CCTTGTCCAC ACCTGTCAGG GGCACGCCGG   1200

GCTTCGAATC GCAATCTGTC TTAGGATTCG AAACACCTCT CCTGTCGTTT ATGCGCGCAA   1260

TCGCACTGCG GCTGACTTCG AGCGTGCCAT GCTCATTCAC CTTTATGACA AGGCTGTGCT   1320

CCCGCACCAC GCTTACCACC CCGTGGATAC CGCCGATAGT AACGACAGGA TCACCCTTTT   1380

TTATGTTCTT AATAAGAGCC TGCGTCCTTT TCTGTTCCCG CAGATTAGGC GCAAAAACAA   1440

AAAGGTAAAA GATCAGACAT ACGACGCCGA TAGCGAGCGG TGGGATCCAG CCACCGTTCG   1500

CCGTAGTGAT TTGCAAAAGA GTTCGATGGG GCATTGTTTT CATCCTTGAG CGCGCAGGAC   1560

ACACGAGCGC GCCCCCAGGC TAGCGCAAAA AAGACAATCC AGTCAATCAC ATCTCTTCTT   1620

TACCAaCGCG CGyGyGCGCT gGCATTAATC TCAAAACGAA TCCATATCGG GCAACTCTAA   1680

AATCAGCTGG ACTTCACCCT TAGAAATCTT CAGTGCGTGC GCAATAGCGT CGTCAGACCA   1740

GCCACTTTTG TGCAGCTTCA CCACATTCTG ACGTGTAGCC AGGGGCGGCG CTCCCGCACC   1800

GGGTATTTTG TTTGCTGGAT CCTGACGCAT CAAATCACCC AGCAAGCGCA ACTGCCCCTC   1860

AGACACCTTA GAAATTTCTT GCAGACGAGT TTCAGTACCC GCAAGCCACT CACGCGCATG   1920

CTGTATCTTT TCAATACGAC TTTCCATTTC TCCCAGCAGC GCATCTGCGC ACTCTATGCG   1980

CGAGCGCACA CGCTCTGCCT TTTCCTGGTT ATCCAACAAT ACGGCAATTT CTGCACGCAC   2040

ACGCTGCAAT TGAGGATCTA CTGTCTCCAA TTCTCCCCTA AAATTTTTAA GCGTCTTTTC   2100

AAGTTCCTTC AAGTTTTCAA ACGCTCTATC CACGTCCTGC ACCGTCTGAT CCAACACCGC   2160

ACCTTTCTTA TCCAAACGCT CATAACGCGT ACTGATATCG CCAAGCCCTT CTTTGACCTT   2220

TCGAATTTGC ACCTGATAGC GCTGCAGATC GTCATTCGCT AACGTGAGCT CAACAATCTT   2280

CTTGTCCATA GCATCAGAAA GAGCAGCAAG CTTTGAAAAC TCTCCCTCCA AAAGATCAAT   2340

ATTCTTTCGC TCCTGCATAA ACTTCTCAAC ACGCTGctCC GCCTCCTCTC CAAAGTGTTT   2400

CACTTTTTCA TACTGGAGAC TAAGCTTATC CATCGCCTCT CGATACACTT CGAAACGGGT   2460

CACCGTCTCA GTCAGCCGCT CGATATCCTT TTCAAGATTC TCCCGCAACT CGTCCGCCCG   2520

ATCAAAAATA CGAGTCTGGC CGATAAACTC ATGCTGTTTA CGTTCAATCT CCTGCAGCAC   2580

TTGCGAAAAG CGGTCACTTT CTCCCTGTAA TTTAGTGAGA AGACCTACCT GCGCCTCCCC   2640

AAACTCCGCG CGCAAATCCT GCACAAGGTC TCGTGTCTCC TGCAAGGTGC GGTCCACCTG   2700

AGCACGTGCT TCTTTTACTG TCTTGTGCAG TGCCTCACTT TCGCGCCGAC CATCTGCATG   2760

GAGCTGTCCT GTCACAGTAT TTACATAGCC ACCCAGTTCC TCTTTGACCG TCCGCATCGT   2820

GTCACACATC TTGCCTATTT CATCACGCAG ACTTTGCAAA GACTCACCAT TCTTCTGAGA   2880

AAAATCTTCA TACTGCATAT CATAGCGCGC ACTCAGGTTT TCAATCGCCC GCTCAGAAAG   2940

ATTCACCAAA TGCGCAATTT TTCCTTCAAA CAACTGCTTT GCATCCgCAA ACTGCTTGTC   3000

GGTGTGTGCC TTCCATGCCT CGATATCCCG TTTGACCGAC CCACAGCCCC CCTGCGCCTC   3060

CTGCTTTATC TCCTGCACGA GCACATTCAT ATCCCGaACT TCGGTTTCAA TCATACTTGA   3120

GTGAACATGC AAAGAGTCAC GCAGgCGTTG CCgCACTGCT TCCAÀTTCTC TCTCAATGAG   3180

ATTATGCGCC TTATGTGCAA GGCCGCGACA TCTAAGGTA   3219

(2) INFORMATION FOR SEQ ID NO: 67:

     (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2725 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 67:

CAGGATnCCC CATTCCTGAG AAGAAGGCgC GCATCrCGmA GtCgACTGAC TACCCTTCCG   60

GCAGCCTCCG GTGCATCGTG CCTCACCTTT TTTACCCGTG GACACATACC CCAATTGCGC   120

AtTTCAAAAA GTCCGTTGAA CAATCGTTCG TCGTTTTCTT ACACGCAGAT GTGCAACAAC   180

TACGAACGCA AAACATCACG TGGCTTGGAT CCATTCGGCG GACCGACCAC CCCCCTTGCT   240

TCCATTTCTT CGATTAGGCG CGCGGCGcgA TTGTAGCCTA TCTTCAATTT ACGTTGCACA   300

TACGATGTGG ACGCTTTACC CGCGTATTGC ACTACCTGCA CTGCCTGCTC GTATAAAGGA   360

TCGCTTTCAT CCACAAAATT TCCAGATATA CTCGCGTCGT CATCGTCAAA GAAAATTTCT   420

TCATCAAGAT ACTCAGGCGT TCCCCACGCG CGTACATGGG CGATCACGCG CGCTAATTCT   480

CGCTCGGAAA CATACGCACC TTGAATCCGC GTAGGAAAAG ACTGACTCGG GTTCATGTAC   540

AGCATATCCC CTCGTCCCAG CAATTTTTCT GCGCCCATCT CATCCAAAAT AATACGGCTA   600

TCCATTTTAG ATGAAACCAT AAAGGCAATT CTGCTTGGAA TATTTGCCTT AATAAGGCCG   .   660

GTGATGACAT CGATTGACGG TCGCTGGGTG GCAAGTACCA AATGGATGCC TACTGCACGG   720

CTCATCGCGC ACAAACGCGC AACACTCGTT TCTAATTCTT TGCCAGAGGC AACCATTAAG   780

TCTGCAAATT CATCAATGAT AATAACGATG AATGGGAGAG CTGCGTGGC GATGCTTTTT   840

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TCCTGTATTT TTTTGTTGTA GGTCTTAATG TCGCGGCATT CTAATTGCTC AAGAAGCGCA   900

TAGCGTcGCT CCATTTCGCA CAGGATGTAC TGTAGTGCTT GGAGTGCTCT TTTGGGCTCA   960

GTGATGACAG GAGTGAGAAG GTGGGCGATA TCGTTGTAGA GCTTTAACTC TACGATTTTT  1020

GGATCAATGA GCAGAAGTTT GGTTTCGTCA GGACACTTGT GGTACAGGAT AGAGAGAATG  1080

AGCGCGTTTA CGCATACTGA TTTACCCGAC CCAGTTGCGC CTGCAATGAG CAGGTGAGGT  1140

GTTTGGGCAA GGTCGATAAC CTGTGGTTCG CCGGTAACGT CTTTGCCAAG GATGACAGGG  1200

ATGGCCATAC GGTTGCTGCC AGCTGTGCGC GTATGGAGCA GTTCTTTGAA TGTAACGAGG  1260

GATCGTTTTT TGTTAGGGAC TtTCCmCCCT ATGGCGTGTT TTCCAGGAAT GGGAGCGACG  1320

ATGCGCACGC TTGAAGCAGC AAGCTTGAGC GCAACGTTGT CCTGCAGATT TGTAATTTTT  1380

GACAGTTTGA TGCCGGGTGG AGGGAGAAGC TCGAACATTG TGACTACAGG ACCCTTCTTG  1440

ATACCGGTGA TTTCTACTCG AATGTTGAAT TCAGAGAATG TTTCCTCAAG CAGGAGTGCA  1500

AGATTCTTGG TGAGCTCGTC AATTCCTTCA TATGTGTCCT CTGAGTACTG GTCAAGCAAG  1560

TCGTACGGTA CTTGGTAGCC GCGGCAAGGG TgCCGAAgCG GAGCTGCTGA GGCAGGAATA  1620

GGACGCGgTG GTCCCTGTTC ATCGTCTTGC GCAGgAATAA GGGTTTCAGC GGGGGCGACT  1680

GAGGGAGCAG AGATAGGAGA GAGGGCCATG ACACACGGTG CCTGTGCAGG GATGACAGAC  1740

GGCAAAGACC CGGGTGACGC GGGGGCGTGA ACGTCTGAGG GAAGGTTACT CTGAATGAGC  1800

CCGGGCGCTG GGAGCAGGGG GAATGGAGCC TGAGAAGGCA CCGATGGCGC CAAAGCAGTT  1860

GGCGTGGACA CACCGCCACA CGCTGCCACt GCGTGGCAGG CTGCACCTCT GCCTCAGAAA  1920

TCAAAAATTC TCCCCCCTGG AGGGGAACTT CCGTGGAGAA TTGCCCCTCT GGGGGCGCGC  1980

TTGCTTCGGG CGTCTGCACA TCTGCGGTGG CGCAGGAGGG AGCGGGGGGA GGGGAAACGG  2040

TGTCAGGATG ATCGGCGGTG GAGGGAGGGA AGGAGGGGTC TTGGAATCCA TCAGCGATGA  2100

AATCcGAGGG ATACGTGCAT GAAACCATAC GTAACACcTT TCCCCGTAAA TGAGTGCAGC  2160

ATAGAGCTCT GCTCCCAGCA ATGCGAGGAG GCAAAGGACG CATACGATGT CTATCCCTCC  2220

CCGCGTTGAC GGTGAAATTG ACCGTGCcAG CGAGTGCGCG TCGTAGCGCG TAGAGACCGT  2280

GTTCTCCACA CACTGCAGTA ATGAACAAGA GTGGGAAGGC AACAAGTGCG CTTTCTGCCC  2340

GTAACGAACG TCCGCCGACA AACAAGAGGA GCGCTGTGTG CAAGAGTAAC AGCGGCACGA  2400

GCAAGGAGGA GAAAGCGTAC GTTTCGTAAA GGAGAGTGCC AGGTACGAAG AACCAGTGTG  2460

ATGCTCGGTG CAAGGTAAAA AGGGGAAGAA ACGTGGACAG GGTCaGGAGC ACTGCACTGA  2520

CGAATAGCAG TGTGCCGAAG gTAAGAGCGA TAATTCTAGG TAAAGGGGAT CGTTCCATGC  2580
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ATTGTCCTGA ACAGTTAATC TGTTAGCTTG CACGCCCTGC AGGCTACCGA CCCCGACAGA   2640

AGGAGCCGAG TGAGGGGAGg AAACAGGCGC GACCCAAtAT CTTTGTAACG GTAAGATGCT   2700

TTGCGTTACA CTGnGACGGG CGTnG   2725

(2) INFORMATION FOR SEQ ID NO: 68:

        (i) SEQUENCE CHARACTERISTICS:
             (A) LENGTH: 3406 base pairs
             (B) TYPE: nucleic acid
             (C) STRANDEDNESS: double
             (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 68:

CGGCGCATAC TGTACCGCAT CCTCCTGGTA TGCGCTnTCA CCCACGGnTT CCACAGCCGG   60

GCAAAGTTCG TCAGAAACGT GGGGTTCTTC CCAATCGTCA GGTAGGCCCC ATAACAGTGT   120

AGTGTCGCCT CTACnTTCCC CTTGCGCTTA ACGGCAAAAn CTGCnTTCCC CTGACTCAGG   180

TCCGCCTGCA GGTCCGCCAC CTTnCAGTCC GCATACAGTG CCGGGTGCTG CCCACGGCGC   240

GTGTGGGTGG TGCGCATAAn CAGGGGAAAG GATACTCCCA CCGTGTTGGT AGTACGAAAC   300

CCGTGCTTCA GATTGTAGGG ACCGGTGCCC ATAACTGCAC CAGGGGCCTG GCCATGACTG   360

CCTACCCCCT TGCCATAGCT GATGCCCCAC TCAAGTGTGG CAGAGCCAGT TAGCTTCGGG   420

GAAAACTCCT GTCCGAGCAC TCCCCCGCTC GCTCCTACCC CCACCACCAC ACACAGCACA   480

CTCCCCCACC GCATGCACCC CATGCTACnT CACCCCCCCC CnGGnCCTGT CTAGTAGCCC   540

CyTCAcCTTC TTTTCTAACA CTACTGCCCA ATCAAGGTAT CCAGCTGCTT AGACAGCGCA   600

CGGTgTGCGC ATTGTTCGGA TCCAGTGCAa TCACCTGATG CAAATAGTAC TGCGCTTTGC   660

GGAAATCCTT TTTCTTTCGG TACCATTCAT ATAACGCAAA AAGAGTGCGT CCATTGCGCG   720

GATCTGAAAG CAAACTTGCA CGCAATAAAC TTAATCGCTC CTCCTCGTGC ACTGACAACA   780

ACGCTTCATA GTACGAAAAT ATCGACCGCA GCGTACCACG CGCGGACGCA CTCCGAGCTG   840

CAATCACCGC ACGGATCTCC CGGTAATGAC GCGCCTCATA CAACGTATCT AAGTACAAGA   900

CGATGACCGT CTCAGACGGA GGCTGTGCCG AATGATATAA ACGCCGCGCA AGAGAAATCG   960

CCTCcTGCGC ACGACCTGAA CCACTGTACG CGCGAATAAG TAATTCTTGA TGAGCCTCAC   1020

TCGGATATGC GGTATTCAAA CgCTCCGCGC GCGACACTGC CTGTTCCCAG TTACCCTGCG   1080

CCAGTTCATA CTGCGTCAAT AAACGGAGCG CTTGAGCGTT ATGCGCATCG GCGCGGAgCA   1140

CCAGCGCGAT AAAGCTTcGC ATGTTTTTTT GTGCAAGCGA GTGACCGGTC TCAAAGCAGT   1200

GCTGCGCACA CGCAAGGAGC ACCTGCACAT CACGCGGATA CAAGCGATAT GCCTGCTGCA 1260

AAAAGTCGTG CGCAGACGCG TCATTTTTGC TCCATTCCTT TGCCACCTGC GCACGCAAGA 1320

GCAAGTACGT TTTATCCGAA CTGTCACGCT CTGCAAAAGA GTCAAGGGAC GCGTGaGCCT 1380

TCTGaTACTC CCGcTGaGCC ACCAAGATAC GAATGTGTAG CAAAAGCGCC GCATTGTCCT 1440

CAGGCTGTTG ACGCAACAGC GCTGCAACGT ACGGTTGCGc GGCGCTCCAT TCTTGACGCG 1500

CGCTGTGAAT TTGCGCCTGC AAAAGCTGCA CTGCTCGGTC TTTCGGGAAA CGGTGAAGCA 1560

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AGCAGATGCC TGCAGGATAG CAGGATGCGT CTTTTTCCCA TGCGCTGCGG TACCTGnACT 1680

CCGCTTCAGA GAGCTCTCCG TGCTGCTCGT GCAAATACCC AAAGAGCAGG AACGGAAGGA 1740

GAGAGTGCGG GGCCTGCGTG CGTGCGCGCG TtCAGGCGTT CTCGGCAATC TGCGTGTACC 1800

TCATCAGGAA GGCGTTTTTT CAACAGAGTC AGCGGGGGAA TGATATCCGA AAAAAAATCC 1860

GGTTCTCCAG GAATGAGCGG ATACGTACCT TTTTCCACGT CATCGAGCGC AGTCAGGTAC 1920

GGATGCGCGG TGTTGTACAG CGGCACATGC CAAGAAACAG CTTCCTGCGG ATATACAAGT 1980

TGCATAAGCG CAnACACACG CGGAGGTACA GCCGATTGTG CGGTGTCAAT CCGGCCGGAT 2040

CGCGCTGTAT GCACGCAGCT GCCTCGCGCA ATGAGGCAGG AGAAGCAGTT TCAATCAAGA 2100

AGAGTATCTT TGGATCCATC AGCTTTGTGC GAATTGCGCG TCGGTCCGGT ACGTCAAGCG 2160

CAtGCCaCGC ACAGGaTGCG CCGCCACCTC CGGCGCCTGG GATGCGGAAG AAACCGGATC 2220

GGTACtGCGC GCGTCGGCAC CACCTTCGAA GAACTGCGAC AACAGAGAAA AACGGGTATC 2280

AGCACAAAAC CGACACTCAC CCCGATGGCG CGGTCAATGC TTTTAGTAAG CGCCCCCATA 2340

GAAACCCGTT TTTACCTCCc TGcATGGCAG TCGTGCCATT TACACAAAAC GCCTGTTGTG 2400

ACCGTACCGA CAACGTACGC ATACCGGCGC ACCGCCGCTT CTTTTCCCTT TACGCGGTGT 2460

TCAACGcgCA CGGCGCATCC CTTGTGCTCC CCACGCAAGA CATGCTAGGC TGGCTGCCAC 2520

CGAGGGCGAA GAGAGCGTAC AGGAGGTTAA CGGTTTTTTT GCGAGAAATC ATTACCGCCC 2580

GTGCGTGTTC ACTCTTCCTG TTTCTCCTTC GTTGTTTCCC TGCTGGTCCC TGTGCGCGGG 2640

CGCGCCGGTT GTCCTTCCTT CTGTTTCTCT GTGGTGCGGC AGCCTGCCCT CCGCTTTGGG 2700

GGGCGTACGC AGCGCACCAg CGTTGCGCGC TCAGTCGGTA CCTGACACCC TCATTCAGCG 2760

CGCGCTCGTG CTCGGTCCGC TCGTGCACCC CCTGTACCCG CCGATGCAGT CCTTCAAAGA 2820

ACAGTACCGG AGCGCGCGTT ACCGGGAATA CCTCTCTGTC GTTATGcAGC GGAGCGCGCC 2880

CTACCGCCCC TTTATCGAAA AACTGTGCGC GACGCTCACC TTCCTGTCGA .GCTGCTCTTT 2940

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ATTTGGCAGT TCATGCGCAA TAGCATCGCA GGATCTGCCA TGCGCGTGAG TGACTGGGTA   3060

GACGAACGGC GTGACCCCTG GAAGGCTTCC GTCGCCGCAG TCAAAAAACT GCAGTGGAAT   3120

TACACGCAGC TGCGTGACTG GCCCTTGGCC CTCGCTGCGT ACAACTGCGG TCTTGGCGCG   3180

ATCAAGCGAG CCATTGCCCA GGCAGGAACC GCCGATTTTT GGCATCTGAG TGAGCGCGGc   3240

TTTCTGCGCG ACGAGACAGT CCGCTATGTC CCAAAGTTCC TTGCGGTTGC AGAAGTACTC   3300

AGCCGGAGCC ACGAGCACGG CATCGCCTGG GGAGCGGCAC ACACCCCCGA GGAGACCACC   3360

ACGGTTACCG TTTCGCGCGC GGTAGACTTA AACCTCTTGG CACAGG   3406

(2) INFORMATION FOR SEQ ID NO: 69:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 7874 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 69:

TGATAGCAAA TTATCTGCTg AAAGGCTCAC AGTACAGCAT GTTGGTCCCA GTGGTTGTTC   60

GCCTGGGGGC GtATACAAGG TGTGAGGGAG TTGGCATTCG GGGGGCGTGT GCGGAAATGA   120

AATGGaGTGG GCTCTGTCTC TTTCTCCGGA CGGGGGGGGG GGGGTGCGAA CAGATGAACG   180

GAAAGCGTGT GTTTCTGGGC ATTGTCgTGG TGGTCtGTGC CGCGCGCTGT TTTTGCGCcG   240

GACGTGTTCT TCTCCTCGCa TCTGGGGTaT GGGCGTTTCT ACGCCcGTGG GGAAAGACAT   300

TGAaGGGGCa GCACATGCAC GTTCCAAGCA TTGGCGGCGG CGTATGTGTG GTGGCArACA   360

GCGGGTTTGC CTTCGCCTGC ACGGTGGACG CAGCCCTGAC CCGTATAATG CTGAAAACTC   420

AGGCGCTCTT TGGCTATGCC TTTCGGTGGG GAGCGTTCAG CCTCATCCCC TTGCTTGGGA   480

TGGATGTGAT TGTGTCGAGC GACCACGCGT TTGGTGTTGC CGCGCAAGTG TCGTTCCAGC   540

ATTTGATTTC TGAGTGGTGG GGCTTTGCCT TGAGTGTGAG CGGCGGGGTG GACTTTCCGC   600

TCAACCCTAA CACCCGCTTT TTAGCAGGTA AGCTGCCTGC AGAAACGGTG CAGCGCGTGG   660

CsTCGTTGCG CTGCGGCAAA AGCTTATTAG CGAAnGGATT ATCAAGGCAT TGGATTTGGG   · 720

CTGGTTTATT ACCTTCGCTC TGACCGTTGT TGCCGAGGGA TTCAGTTGGA TTGTGTCGCA   780

GAGCGCTTGG ATTGCGCAGA AGGCGGTGAA TTACTTTTTG AGCGACACCA CGCGTTGTCT   840

CATTCTCCCG GTCACGCTGC GGGCCGGTCC TACCTTTCGA ATATAGCGTG CGGGGGGGGG   900

CGGATTTAGC GGCGCGTTGG CGTCCGCTGT CGAGTTGCCC AGAGCGCGAG AAGAATGCGG 960

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TGAGCGAAAs CgCGTGGACG ACTGTCTGCC CGAACTTTCC CGGCAGtGCG GCGGCACcGC 1080

AGTATCCACT TTGAAAGGTA TACCATCCCC GAGGCCATGC AGGCCTGGCG CGCTCCTGCC 1140

GAAAGCGCAC CGCTCGTCAG GGGGACCCCA AGCAmCGTTG CCCACACGCG TCCAACCGGC 1200

GGTCTAAGGT AGCAGGCGAG CGTTCCCACC CACAGCCCTG CCAAGGTCAT CCAGCGGATG 1260

CGTCCCCCCk TTGCCGCATA GAGCAGCAtG CGATCCCGCA CACGGACGCC TGCACGCTCA 1320

GCCGCGGCAC ACACAGCAGT ATCAACAGGA GCAGGAGTCC TGTCCCCATC CGTACATAAC 1380

GCAGCACACG CGGCCTAAGC CgTGTTCCGA ACACGGCGCC GTGCATTCAC ACCCCGCCTG 1440

TACCGGAAAA AAAAGAGACG CAGGCGGTGC GGTGTCTTGT TGTCCGCATG CCGCGTTCTG 1500

CAGGTGCGCG TACCACTGGG AGTGGGAGAG AAAATGGCCG GTTAGCGCTC CGAGTAAGGT 1560

ACTGCTCACT GCCCCCAGCG CGCAAAATAG CGGGAGTACG TACCACACCC CCGCGCCAAA 1620

AACGAGCACC CGAGCAAGCG TAAGCTGTAT CACGTTTGAA CAGAACGCAC CCATCACGCT 1680

TATCCCCACG CACGAAAGGT ACCGGCACGG GACGAACCGC AGCGCATACA TGAGCGCACC 1740

CGAAGCGGTG CTCCCTGCAA GCGAGAGGAC AAATACATAA GAAAAGAGCG TCCCACTCAC 1800

CAGAGCCTGC CCTATTACCT TCAGGAATAC TAAACGCGCG TACGCACAGA AAGGGAGCAG 1860

ATCCGGCGAG ATCAACAGCG GCAAATTCGC AAGCCCCACG CGAAAGAAAG GCAGCGGCTT 1920

TGGAATGACG TGTTCAACCG TAGAGAGAAA GAAACACATG CCGCCTAAAA GCGACACTAA 1980

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TCTCGCCCCA CTGTCATGCG CAAGTCCTCC TGCACCTCTC CATACGCTCC TACCGGAGGA 2340

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ATCTCCCCCt GTCATCTCgC AGGGTGTACT CGATgTTCAC CACACACTCA TTTGCGATTT 2520

TCATGCGCGG CATGCTAGCA CAGGCAAGAT aCTCACGGCA AGGGCAGTTT CTGTGCCGTG 2580

TGCCyTTGAc AGAATCGCCG TTATAGGGGA TAAGCCGGGC GAGGTGTTGG GAGCGTGTGG 2640

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TCCACTTCTT GCCCTCTTGC GCgGTGCTGT GCgGTAAAAG AgGGGGCGTC gCGTTCGAGT      2700

AAAATTTTCT CTTAAGCCTT AAGTGAGATA CCCCATTATG GTAGAGGTCt AACCGCGGTT      2760

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AACACCTTCT TGAgGACATG TTGCGGTCTT TGaCTGTTCT TTCGCTTCAG CGGGATCCTA      3000

TCGGGGAAAT TATAGAAGGG TACACTCTTG CGAATGGACT GGAAATCCGG AAGGTACGTG      3060

TTCCTCTGGG GGTGGTGGCT GTCATCTACG AGTCTCGGCC CAACGTGACC GTAGATGCGT      3120

TTGCACTTGC GTACAAAAGC GGCAATGCGG TGCTCCTGCG CGCAGGTTCT GCAGCGAGTT      3180

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TGGACGCGGT GGCTGTTCCT CCCGTTTTGG AGGAAAAATA TGGTGATGTG GATCATATCC      3300

TCcGCGCGCG CGgCTTTATC GATGCGGTAT TTCCTCGTGG GGGGGCGGCG CTTATCCGGC      3360

GCGTCGTGGA AGGCGCCCAC GTGCCAGTTA TTGAAACCGG ATGCGGCGTG TGCCACCTAT      3420

ACGTAGATGA GAGTGCGAAT ATCGATGTGG CGCTGCAGAT TGCAGAAAAC GCGAAGTTGC      3480

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CTTTTTTGCA CCGTGTACAG GAGATTTTTG CCACCTGTGA GGAGACTACG CGCAAcCCGG      3600

TGGTGTGGAT TTTTTTTGTG ATGCTGAGTC TTTCTCCCTT CTCACAGAAA GGGGCGCGAG      3660

AAAAAATGTT TTTCATGCAC AGGCAGAGAC CTGGGATCGG GAATACCTGG ACTATCAGGT      3720

ATCCGTGCGG GTGGTGCCAA ACCTTGAAGA AGCACTCAGG CACATTGCTC GTcATTCTAC      3780

GAAACACTCA GAGGTTATTG TCACGCGCGA TCGTGCCCGT GCGCGTCGTT TTCATCAGGA      3840

AGTAGATGCT GCCTGTGTAT ATGTCAATGC TTCAAGTAGG tTTACCGATG GAGGGCAGTT      3900

TGGCATGGGA GCAGAnATTG GGGTCAGTAC GCAAAAATTG CACGCGCGCG GTCCGATGGG      3960

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ATCCGTGCGC TTTTTGCTGC GGCAAAAAAA AtTGTGATAA AGATTGGGTC AAATACGCTT      4080

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GCGCTGATGC GTGACGGCAA GCAGATAGTT GTGGTGTCGT CTGGCGCTCA GGTTGCAGGG      4200

ATTTCTGCGC TCCATTGCCT TTCATCTCCT CCTCAGGGGG CGGGTTTAGA GCGTCACGAA      4260

TCGCGCGGCG TTATTCCGGG TGATGGTGCG TCCTGCAAAC AGGCGTTGTG TGCGGTGGGT      4320

CAGGCGGAgT TGATAAGTCG TtGGCGTTCT GCGTTTGCAG CGCACCAGCA GTGCgTGGGC      4380
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CAGTTTCTGT GTACGAAGGA GGATTTTACT GACTCGGACC gCGCGGCGCA GGTACGCTAC   4440

ACGTTGTCCT TTTTGCTCGA GCGCAGGGTA GTACCTATCC TTAATGAAAA TGACGCGCTC   4500

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TGCTTTTGTT GAGTGACATT GACGGCGTGT ATGACAAAGA CCCAAAGGCA CACACAGATG   4680

CGCAgcACGT TCCTCTGGTG ACGGACGTGT CAGCGCTTGT GGGTAAAACG AGCATGGGTT   4740

CTTCCAATGT CTTTGGTACG GGTGGGATTG CTACAAAGCT GGATGCTGCG CGTCTTGTCA   4800

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GGGCACGCTT TCCACATCGG GGAATGGCTG GTCCCTCGAA CTGAAGTCTA TTTCTTGGAA   5160

TGGCCGGCCA GAGAAATATG ATATCCGCGC GTGGTCCCCA GACAAGAGCA AGATGGGAAA   5220

GGGGGTaACg cTTACGCGTG CAGAGATTGT AGCCCTGCGC GATTTACTAA ACAGTATGTC   5280

CCTGGACCCG TACTAGGGAC AGTCTGCAGT GCTTTGTGCA GcGCGGCGCg cAGcgTCGGt   5340

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CGGTTGTTTG GCAGCCGTTT TCCAGCCGTT GTGTTTCCAG GTATGGATCC ACTGGGTGAT   5520

GCCTTTGCGT ACGTATTGGG AGTCGGTGAC CACTACCACC GCCTCTGCAG CGCGTCCGTG   5580

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CAGATGAATA TTCTGCATAA CTTTGTTGTA TTCGAAGGTA TTGATGGCAC AGGCACGAGT   6120
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TTGGTTcCTG TTaGGAACCC CTTCGGGGcT TCTGTcTATT TTGcTCCCAA GACTGCTAkT   7740

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AAAAAGTTnG GGCC   7874

(2) INFORMATION FOR SEQ ID NO: 70:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 20682 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 70:

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TCAATCCTGT TTCAGTGATT GAAAATAATG TCTTCGGCAC CAAATTCTTG CTCGATGCCT     180

GTATTGCGTG TAGGGTTAAG CGCTTTGTAC TTTTGTCCAC TGACAAGGCC GTGGATCCTG     240

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TGTGGTGCCT GTCGCGTATC GTATGTGTTT GAACCgsTAC GCATCGGACC gCTGTCGCCG    11160

TTTTCCCGGT ACGGACGAGG ACTGCTCTGC GGCGTCTGCC GGCGATCCAG GGCGGTCGTC    11220

AGCAGGCGCT GAAGGTATTG ACCTTTCTGT ACCCTTCTCT TTGTCTTAGT TTTAATGGCG    11280

CTTGTCACCG GATTGCCCCT TAGGGGGGTC CGCATGTCTG CGGATGCGCG CGAGGCTCCG    11340

TGCACTGAGC CTCGCTCCGA CCAGTAGTTT CGAACGCACA AACCAGCCTC GTgGCACTTC    11400

CAGTGCGTAC CGTACTGACC GGTTGCTGCG TACGCTGTGT GTGCTCAGCG GGACTAAGTC    11460

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GTCCTTCATC CAAAaGGAGA GGCGTGTGTC CTGTTTATAC ACGAAAaGCA TGCCgTCCcG    11580

TCGGGGATCc GTGTACGCCC CATGTACtCg CGnCCTGCGC TTCTTCCGTG AGTGCGAGTT    11640

CTACAACCAC CGGCACGTAC TGCCCTCCTG TACAAAAAGC GATTTGCGCT GTTTCTAGGC    11700

TATTCGTTCT GCACGCCACA CAGGAAAGCA ACCCCAGTAA CAAAAGCGAC AGCGCAgCAG    11760
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GTGTCCTGTG CAGGTAGAAG GAGACGTGCT CTTCAAAAGC CTTGTACAAA ACGCTTTCGA    11820

TCCTTTTCAG CATTGCTCTT TTGAGTGTCG CGTGCACTAA GCTGTTCGTT AAAGGCGCGG    11880

ATATCTATGT ACTTGATAAT AAGAGGCCGC TCGAGCACTA GGCGTGTGGA CGCGTCTTCC    11940

CACAAGGCAA CCCGAGGACT GAGCTTATGA GGTTCGCCGT ATTTTTTACA CAAGTTCTCA    12000

TATACCGAGT AGTAATCTAT CGCGTCAGTG TTGAGTTTGA ACGTCATAGC ATATAGACGG    12060

TCACGGTAGA ACTGAAACCA GCTGCGTGCA ATAAAGTGGG GACCCGTGGT CTCAATCAAG    12120

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GCTTTTTCTT AAAATAGGCA ACGCGCTTCA CCAATTCTAG GTCGTCGGTG ACAGATATTT    12540

TGTTATCGAC ACAGCGGACA ATAGGTTCTC GTAAAAAgTC TtCGGTTACC TGAGAGACGA    12600

TGTCTTTAGG GAAACCGCAC ATGTGTGCGA GTTCTATGGG ACCGAATTCA AAATCGTAGG    12660

CCTTGCCGGT GCTAGGTATG TAGCGAATCT TTTCTAACTG GATGGCCAAC ATATCGTACA    12720

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GATCTGCGAG CGTGGTGGTA AGACGCGCAg TCAATTGCGG TTGTGTGGCT ACCAGCTGTT    12840

GGAAGTTCTT TCGGTTCACG GCCAAAAGCT GGCAACCATC AGACATAACA ATGGCGCTTG    12900

CAGAACGCGG CTTGTTCTCC AGCAACGCCA TTTCCCCAAA CATATCTCCT TCTTTTAAAA    12960

TCGCCAGCAC TACCTCATTG TTATCAACAA TCTTAGTAAT TTTTACATGT CCTTTTTGAA    13020

TGATGTAAAA CTCATTTCCC AATTGACACT CACAGAACAC CATCGCCTCT CGATCGTAGC    13080

AGCGCGTGGC TTCAAGTATG TTAGGTTCGA GTATTTCTAC TGGTACCTTA ACTCCTGTGG    13140

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TGAGATAATG ATAGTACGCA TAGAGCGCAA GTTCAAACTT CGTCATTTTG ACGTAGTATT    13260

CGCCAATAGC GAAAAGATGC GAGACATCCA CATCAGTGTG TTTTTTCAAT GTCAATTGGG    13320

TAAGCGCCTC ATTGAGGTAG CGCATTTTCT TTGTGAAGGA AAGGATGATT TTCATAGCAA    13380

TCGCCGCGTT CTTTTCAATG AGCTGGGGGA ACTGCTCATA ACGAATTGCA ATAAGCACGA    13440

CATCAGTGAG CGCAACTGCA GTTTCAATCT GATTATGCCG CGACATGCAG GCAACTACAC    13500
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CTAAAAAGTT ACCCGCGGTT AGGACGTTTC CTTCCTCCTC TGCAACTATC TCTACTTGTT   13560

TTGCAATACA TACCTGACCG CTGTGAATGA TATAGAAAAG ATCTGCGTCA gcTTTCCCCT   13620

CTACTAGTAT GTAAGAACCC TTCTTGAAGT TAACAAACGT CAGCTGTAAC AAAGTATCCC   13680

ACTCCTTCCT AATCGTCGCT CTATGCTCTG TTTACAAGAC AACCCGTACG TCTTGCAGTG   13740

CACAGGTGCC CGCCTCATGA GTCTCGCGAA CTGGAAGTCA TCCTCACAGA TTCTCCAGAA   13800

AAAATGATTT CCCGTTCGAG CCACACTCCG TGTGTTTCAA ACACGCGTTG CCGAACGACG   13860

CGCAAGAGTG TGCGCACCTG ATGTGCGGTG GCATTCCCCG TATTGATAAT GAGATTTCCA   13920

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CGGGGTGAAG TaCGAGCGTG CGCGCAGAGT GAAAnCAAtC TGCGATTGCA CGCCCATAAC   14400

ATCGGGCGTT CATGTACGCG GCACCACCGA CACTACCAGG CAGCCCTGCA AAGGTCTCAA   14460

GCCCGCGTAG AGCGTGATGG GCACAAAAGG CCAGGAGGGC GGCCACAGGT AACCCCGCGC   14520

CTGCATGTAC GAGCACTGAG CCATCGCGCT GTGTTTGGGT GTGTAGACTG CGAAAgCGAC   14580

GAAGGCTCAA CATcAGACCC GGTACGCCCT cGTCTGCGAT TAACACGTTA GAGCCTCCCC   14640

CAATAAGGGA CAGCGGAATG CGTGCGCgCT GCGCTTcCTC AATAAGCGCG CGCAgcTGTG   14700

TGCAGGAGCG CGgcTCCGCC CAAAACTGCG CAGCgCaCCA ATGCGGAAAG AACATCGCTC   14760

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CGGGCACGTG CGTgCTCTAC GGTTGTGGGC CTACGGTGTA CAATTATCCC CATCTGGGGA   15120

ATCTGCGCGC ATACGTTTTT CAGGATACGG TTCGACGTAC CTTGCACTTT CTTGGATACC   15180

GCGTCACCTA CGTTATGAAT ATTACCGACG TTGGGCATTT AGAAAGTGAC GCAGACAGTG   15240
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GTGAGGATAA GCTGGTAAGG AGCGCACAGG CGCATGGCCA CTCGGTGTTG CAGGTTGCAG    15300

CGCACTATCG CGCAcCTTTT TCCGCGATAC TGCACTGCTC GGTATTGAAG AGCCGTCCAT    15360

TGTCTGTAAT GCCaGCGATT GTATCCAGGA TATGATCGCG TTTATCGAGC AATTGCTCGC    15420

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CGCGCGGtGG CACACGATAC GCATAAGCtG ATGCACGTGA TTTTGTGCtG TGGTTTACCC    15600

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CGTTAAATTA CGCTAAGCGT CGTGTACGTG AGCGTCATTC TtGTGAGCAA GCGTCGCGCG    16860

AGCATGTGTG CGAGCCGGAT ACCGGTgrmT TCGCTTGTTA AGAATAGAGA CGATTGAGCA    16920

GGTGCGCGCG GCCTTAGATC GACTGCCCGA GCACCTCCGT GTGGTTTTGC AGTTGCGCGA    16980
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GTACCTGTCC TGATTGTGCT GCTTGGTGTG CTTATGTGGA CGGAGAAGGT TCGCAACTGC   17160

AACGCCGTGA GATGTGCGCG CATCTGCAGG GTTGCACACA CTGTGCCACG TGTGTGGCGC   17220

ACTATCGCGC CATGCGGAGT CTTGTCAAGC ATGCTGATCG CGTTTCTTCC CGTGATTTTA   17280

CAATGGCTTT TCCATATTTG CGCGTGCGTC ACCGTGTCGC TTCCTGTATG CCGAGGCCGT   17340

GGTGGCAGGC ACGTTCCTCT CCTCTTTCTG CTGCAGGACC GGTCCgTGCT GCGGCACTCG   17400

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AGATCCTGCG TATGAAATGG AAACAGTGCC GGTGAGGCTA TCGGTTATTC CTGTGCCTTC   17700

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GAGGATATGC GCGATCCTCT GCGTTTCGCT GCTATGATGC TTGACCAAGG TCACGCAGAT   18240

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AAAAAAGCGC CTCACAGTCC TATTACGGGA AAGGTGAACA CACTCGTGTT TCCCGATCTT   18720
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CGGTGCGGTG TATGAGAGGG GGGCACAGGA AGAGTGGAAT GAGGGGTCGT CTGAGTCGCA    19080

CGCGCACGGT GGGGATGGTA CGCAGGACGC GTATCCTGAG ATTTATTTGT ATCTTGCGCG    19140

TGCATACCAC GCACAAAGGC AGTATGCGCG CGCGGTAgTA ACGCTACTGT GTATTCTAGG    19200

CGCGTGCCGC gcGrACGGCG CAGGTTGGTT CTTTTTGGGA AGGAGCTATC TTGCACTGCA    19260

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TATGGAGCGT ACCTGTCCCG CTGGAGGGAC AATCGGGTTA TCCGcAAGGA TTTTATAGCC    20400

TTTCTTGAGA GAACAGAACG GTGGTCcGAA GCGGCGGACC ACATCGAGTT GCTCGCCTCG    20460
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GGTGAGCGAG GGGGTTTTTG GGGTACTCGC CTTGCGTTTG CGCGTAAAAA AGCCGGCCAG   20520

TACAGGCAGG CTGCAATTAT CTACCGGGCG CTCTTACGTC AGAGACCGGA CGAGCGGGTT   20580

TTACTGCACA ACTTGGTATA CTGTCTTGAC AAGATGGGGC AGGCAGACGC AGGGCTAAGG   20640

CTGTTCCGCG CTGCGTGCAA CGCGTTTGGG ACGAGCGTGG AA   20682

(2) INFORMATION FOR SEQ ID NO: 71:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 1356 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 71:

TTTATGCACC CCAnTGAATC GACAGCCCGA CTTCAGAnCA CACAnCCCGC GCAgCCACAg   60

GATGAGCTcC TGCGGCAAaT GGTTACACAA ACACCGTCAC TTCACCGCAG CATATATCCC   120

TGCACCAATm rCGGCTACAC CGCACACAAC TGCAACCCCG ATAAGAACAT TATTCGTGAT   180

CTCTAAACGC CTCAACCGCA TGTTCAAykm GTTCACACGC TGCCTCAATA TCTCCAATTC   240

GCTTCTCAAT GTCTCTATCA ACTCTTTCGA TTCGCTCAAT GCGTGCTCCG ATTCCTcCAA   300

GgCCTTGGCG GCCTTCTCCA ATTTCACGTC GAGCGTCTGT AAGGCCTTTT TGAGCGCGGC   360

CGATTCGGCG TGCCGTTCCC TCAACTGCTG CTTGAGCATG TTTGATTCGA GCCGGATCGA   420

TGCCACcTCC CCCATAATTT CCTTTAAAAG CCCACCAGTA GCCGCCTGCG AATCCGCATA   480

TGCCACAAAA GAGCGCAACA ACACCATACC CCACAATAGT GCGCCCACAC CCCGCTTCCA   540

CATTCGGTCT CCTCACGACG ATGCGTTCAC CTTCCATTCA TGAATAAATC CAAGCATGTA   600

TTGCTGGATA TCCTCAAACC ACTTCTTTTG GAGTGCGCAC GCAGCaCCCC TACATAACGG   660

AAATGCCACG GCTCCCATAC ATACCCCGTC ACCTGCTCGT AACCAGGGGG AAAAGACAGC   720

GACCATCCAA AACGATGGGC GTTGCGCTGC GTCCACCTCC CTGCATCACT CCGTGCAAAC   780

GCCGGCGTGA TAGAACCGAA ATCCACTACC GTCCCCAACT GGTGCTGACT TGTTCCTTCT   840

CGCGCGGAAA AACGCATAGC CTCCTGCATG CCATGCTCCT GCGCATACCA GGAGAACAAC   900

TTTTTCTGAT ACGCAAAAGA GCGATAGGCA GAACCAACGG ACAGTGCCAC CCCGTCACGC   960

GCAGnCGCCT GAATCAGCTG ATGTAACGCT TCGTACGCAA TCTTAGTTAA AAGGAGCGAC   1020

CTCCCCTTTG AAAAAAAGAG CCACTGCTCA CGCACCGGCA CCAGATGCTT CGGCACGAAC   1080

GTTTCTGGCA GGGGATGTTT CTTGTCAACC AAACGCAACA GATACCCCTC CGTGGTAAGT   1140

ACCGCGTCGA GCTCTTGCAA AAACTCCCTC CCCTGTGCAC ACAAACGCGT ACAAGGCGCG   1200

CAGGAAGCGC CGCGCGtTCG CAGCAGCACG CACACGATGC AGATCCACCC GATCCACGCC   1260

CTGcGGcGAG ACCGCATTTC CCAGAGCAAC TAACACGTAC CCTGGCATAC GCACACGCAT   1320

TCCAACGCGC CAnTTAGTCC AACTCATCTA ATGATT   1356

(2) INFORMATION FOR SEQ ID NO: 72:

       (i) SEQUENCE CHARACTERISTICS:
             (A) LENGTH: 4579 base pairs
             (B) TYPE: nucleic acid
             (C) STRANDEDNESS: double
             (D) TOPOLOGY: linear

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 72:

TACTGGTGGT ATCCACCTCA ATGAACTGTT TTTCCCTTTG TGGGAATCTT CTGAGGATCT   60

CCaTCAACGC GCAGGAGCTT GGCTGTATAC TTATGCACGT GATGCAGAAA AGGAGCTCTG   120

ACATACAATC CAGCGGTGTT ATTCGTTTTT ATGATTTCTC CGAACTGGGT GATGAgCGCA   180

AcCTGTCCTT CCTGGATGAG GTAAAACGGT TGCAGGwGCA CAACACCACC TAACAGCACC   240

CCAACGACTA TACCTATGTT CAGAACAGGT CGTAaCGTGC GTGTACCTGT AGTCCACGTT   300

TCCTCATACC CCTACTCCTC GCGTGTTCCT GCCACGACCT TCTTCGATAC CTTACTGATA   360

TCCTTGAGCG TTAAAAGATT CTCCAGTTTT TTGTCAATCA ACAGCACATT TTCAGTCTTT   420

TCCAGGATAG CCCCCAGTCC CTCAAGGTAC AAACGCGTTT TGGTAACATG AGGTGCTTTG   480

ACATATTCAG CATAGATTGA GTCAAAACGT GCTACATCTC CTTTTGCTCT ATTTACGCGT   540

TCATTCGCAT ATCCCATAGC CTCCTGAATC AACTTGTCCG CGTCACCTCG GGCCTTAGGA   600

ATTTCCCTAT TGTAGGACTC TTTTCCCTCG TTAATGAGTC GATTCATATC CTGAATAGCA   660

ATATTCACGT CTTCAAACGC TTGCTGTACC TCCTGAGGAG GAACAACATT TTGCAGCTGC   720

ACGGAGGAAA CAAGAACACC TAGGCCAATC CTTTTCAGGA GAACATTCAT CATATCCTTC   780

GCACGCATCT GAATCGCACT GCGCTCCGGC CCCATGATAT CAAGAATCGC TCGATCTCCA   840

ATTAAACTGT TCACCACTGC TTTTGAAATG TCTCGAATGG TTTGCCTTCG CTCCTGGGAC   900

TCAACATTAA ACACCCATGC TCTTGGATCT ACAATGCGAT ACTGAACCAC CCACTCGACG   960

TCTACAATAT TCAAATCCCC CGTAAGCATA AGAGACTCGT GACTGATATT ATTCACATAG   1020

TGACTCTGCT CGGAACTCTT CGACGTTCTG AACCCGAACT CTTCCTTTTG CACCTTGGTT   1080

ACCGGCACTT TATACACCCA CTCTACAAAG GGGATAAGAT AATGCAATCC CGGTTCTAGC   1140

GTCCGATGAT ACTTGCCAAA ACGGGTGACC ACCCCATTAT CAGTGGGAGA AATGATCCTA   1200

ATAGGGGAGG CAATTCCAAC AATCACGATA CCGAGCACCC CACCTATGCA TCCTGCCACC   1260

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TCGTCTTTTC GCCCATCTTA CGGGAAACAT TTTCCTGTGA CAACACTCAC CGTATTCACA   1380

CAGAcTTCGT TGTAGACAGA ATAAAAATTC TCACTCAGTA TAAAAACACA GGAGGCATGA   1440

TGTATCTTAC AAAGGAACTA CTCGATACGT TTGCGCACGA AGTCGCCGCA GATCCTATAC   1500

ACAAAGCGGT CGCAGGAGCT GTTGCGCGCG TCGGTCTTGA AGAAGCTGCA CTGAACACAG   1560

AAGTGGCGCG TCAgCACACA CATATTTTTT CTACCGAGAC AAAACGTGGA GAAATGACCA   1620

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CTTTTCACTC TTCCAACTCA CGCGTTCTTC TTGCAGTCCT CACTCGTCGG CTGAGGAAGC   1980

ATGCACAGCT TTTACGTTCT GCGCATGAAG AAGGCGTTGC GCTGCATACC CTGAGGGAGA   2040

AAAAGGAAGC GTTCCTTTCT TCCATCTACT CTATCCTCGT GAAGGCTCTC GGGAGACCTC   2100

CGGAGAAATT CGACTTTGTG TACAAGGATA AGGAAAAAAA ATTTCACAAA GTCAGAGACC   2160

TTACGCCGCA GAAGTTTTTT TGCGATTTCG TCGGATGGGA TCTTAAAAAC AAAGTGAGTT   2220

TGATTCACGC GCCAACTGCG GATAAACCGT TTGGCAGAGC ATACACGGTT AAATTTCTAG   2280

GCACCGTAAA GGAAGCCCCG TGCATCTGCT ATGTCAATAC TCCCATTGAA GTGCTCAAAG   2340

AAGCTACAGC TTCTGCAATC CGAGCCGGGG AGCCGGTATG GTTTGGTTGT GATGTAGGTC   2400

AAATGATGAC GCGCAAAGAT GGTATCATGG ATACGGAGAT ATTCGGGTAC GAGTCGATGC   2460

TCGGCACTAC CCCTGAATTC AATAAAGCAG AACGGCTTGA CTATGGCGAA AGTCTTTTAA   2520

CACACGCGAT GGTCATAACC GGTTTTGACG AGGATGCACA AGGTAACCCC GTACGCTGGC   2580

AGGTAGAAAA TTCGTGGGGA GATGACACAG GAAAAAAGGG CATGTTCTCT ATGAGCGATC   2640

GCTGGTTTGA CGAATATCTC TACCAAATTA CGATCGACAA GAAGTTCGTA CCACAGGTGT   2700

GGCTCGATGC GCTAGAGAAG CCAATAATAG CGCTCGAACC TTGGGATCCG ATGGGAGCGC   2760

TGGCGGACAC CCCTCTGTAT CTTAAAAATT AAGAAGAAGA ACAAGTGCGC AATTCTGATC   2820

GGTACTTATT TACGGTACGT CTTGCGCACT TGATGCCCTG CTCACCGAGC AACTGGGCTA   2880

TCcTTCGGTC GGAAAGGGAT ATACGCTGCG TTCGTACCTC TTGTATGAGA CGTGATATCC   2940

GGTACTTAAC TGATACTTTT GAGTGCGGAG AACTCGGGTA ATTCTGTCCA AGACTGGACC   3000

GATCACGATA TTCTTCGGTG GATAAAACCC GAGGGGAGAA AAAGTACCTT AAGGAAAAGT   3060

GTTGCGATCC GTACTGGAGC CATTTGTCGC GCACTATGCG GGACACTGTT GAAACGCTCA   3120

ATCCGGTCCT GTGTGCAACA TCTGTCATTC TCAGGGGCGT GAGctTCGCA GGTCCGTGAT   3180

CAAAGAAACC GCATTGGTAG TGAACTATTG TTTTCGCGAT ATCCAGCAAG GTACGTTCCC   3240

GGTATGAGAG CATACTTACA AGACTGAGCG CGTCGTGCAT GCATGCTTTC AACGCGTGGT   3300

TTTTTTCTGC CGCTTTTGAA TGCATGCAGT AATCGTTTCG GAAAACCACA GTTGGGATGC   3360

CCGTGCAGTT AATCTGTGTA ACAAACCCGT GCGCAGTTTT TGTAATCAAT ACATCTGGTT   3420

CAAGCAACAT GTTCGTGTCA GcCCGCTGAG CGTTCGACAC ACACTTACCT GGAAAGGGAT   3480

GTAGTTCCTT AATGAGGAGC AAAATATCTT TCACGTCATT TGACGAAACC TTCTGCACAC   3540

AAAGCCCCAT ACTATTAATC TGTGTCGTCA GCGCGTGCAC GGATACGCGT CCATCACACA   3600

TATTGTCAGA GCAGAAAAGC AATTCGCTGT GGTGTGTTAG TAGATTGATA ACACATCGAT   3660

ACAAGGGATC AGAGAAACGC TCAAAGCGCA gCCGCGCTTG GACTGCCAAT GATTCTTTAA   3720

AATTAAAAAC AGCACACCCT TGTGGCTCAA GTCTTTGAAT GAGCGCTATT GCCTGcGGTA   3780

TTTTTTCTTG AAGGGCTGTG GGCATACTAC CACACATGTT CTGAAAGATC GCAGGAGATA   3840

TGGAAAAAAA ACCGTGATCA TCTAACATCT GGATAAACGC GCACGCCAAA TCGAGCACAA   3900

TCGCTTCGTG TTTTTGATAA AAAACTTGTT CACGCAATAC AGCTCGGATA TTGTCAACCT   3960

GCTTATCGGG CTGATTTTCC AGCAATTGCT GAAAgCGATC ACGTGCGCGC ATGCgctCAC   4020

GTCTATCACC GAGCGACAGG TAACAAGCCT TCCCAGTGCG ACGAGCGGAC GAAGGACGTA   4080

TTTCTAAAAG GGGATTGCGT TGCACGGCAC GGAGAACCTC GGTCTTCAAA TCCCCCCGAG   4140

AAAGCTGCAG TAAACAAAGC CCGTGCACCA ACCGCTGATT GAGAACTAAC CGCTGCTGTT   4200

GAACAAGCTG CTGCATATCA CCACGTGCCC TGCAAACCAA TCCCACGAAA GGAATACAGA   4260

AAAGGAGCGA AACGCTCACA GGTGCGTAGT TTCTAGGTTC TCCATTTCTA CTAGCGCACG   4320

CGACGCCGTT TGCACATACG CTCTCGCCTG AGAAGCCTGC TCACGGAAGC TAGCATTGTC   4380

GCTCCCACGG ATATCAGACC AATTGGTAAG CGTTGCGTAG GCACTTGTTT TCGACGCCCC   4440

GATCATACTC GCCAACATAG CGCCAATGCA ATGAAATGCC TTTAAGGTTG CATCAAGCAA   4500

GACAGTCGCC TCAGAGTCAA TTACCTTTAT CAGAGCTTCC AGAATACCCT TACTTTTCAT   4560

GGTAACTGTG TGCTCTTTA   4579

(2) INFORMATION FOR SEQ ID NO: 73:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 1015 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: double
       (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 73:

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ATTGGGAACA GCGCAGAACT CTGTTTCATT TCATCCCAAA AGTATAACGA TGAGACAAAT     120

GCATCCCACA GCTTAGTTTG TGGAGATTGC GATGACTGGG TGGGAAAGTA AGGCGTTAGT     180

TTCTCATTTT TAATCACAGT GTTTATAGAA AGATCGAGAA ATTTATAGAT GGAAAAAGTT     240

ATTAGCGGAG AAAAACTGAT ATGACTTTTA TCCAGATCTT TAAAATTAAT CTCTAACGAG     300

GAAGACAATG TCCCCTGTAT TTTTATACGC CGCTTCCAAA AACGTACTGT CAACGGAAAA     360

TCATCATGAG ACAACGTGAG CTTTAATTTA CTTATAGAAA GACCATTATT TCCAGAAGGT     420

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GACACTTCAT AAGAATCGCT CATACTTTTT CCAATATCGT ATACGTAGGT TTGTTTACAG     540

GTTATTTCGT AAGGCATTCG AAAATCTAAT TCAGCGCGTA CcTGCGGTTT ATCGAGAAAG     600

CGTGCAGAGA GCGTCGCAGA GATATACGGA AAAGAAAGAA ACGTCGCAAT GCTATACGCA     660

TATGGTCCGG GCGCAAAATG CACACTGACA CGTATCTGCT GTGTATATCC ATACAGTGAA     720

AAAGCAGCAT TTGCGGTGAT GCTATGATCA CGTACATGTA ATGAACTTTT CCCAGTAGGT     780

CGAGACGAGT CGTATAGCAC GGGGGTAATT GACCAACCGA GAAAACTTTC TCGAAAAAAG     840

GAATCTGCAG AAAAAGGATA CACTGCAAGA TTATTCGAAC TCTGCACTAA AGCGGAGTTC     900

TGAAATCCAT TTTGTTTTGC CAGGTGGTTG ACTATGAATC GGATATCGGT GCTGCAGAGT     960

GCACTGTATC CCGTTTGACA TGCGAATTAT ATCATTTACA CACTGAAACT GAGAG        1015
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(2) INFORMATION FOR SEQ ID NO: 74:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 9974 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: double
       (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 74:

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AAAACAGATT TGTAATGTAC CATCTGCCCA TGGATATGGT ATCTGCGGCG TCCGCGCAAG      60

CCTACCCCCG CAGCCCCCTG ATTGAGCGCT CGTCCCCTAC AGTCTCACAC TTTTTGCCGA     120

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TGAGAATCCA TCAACGCTCT GCTCCGTGCG TGCCTGTGCT TCTTTTTCTC TTCTTGCCGA     240

GTGCGCCGCT TTGTGCGCGG GGTAGCAAGG ACTGGACGCC GCCGCAACTG GGCGAGGTGA     300

TAGAGAGTAC CGAGCAGGAC CTTGCAGAGT TTGATGCCGG CCTTTTCCGT GCGGATCGCA     360

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GTCCAGAGAG CAAAGAAATA CACGAGTTTC TCAATCGAcT GCGCAATTCT TCTACGTACG     540

CATGTACGCT GCCCGTTTCT TTCACCTCAT GGAGCGGGCG CGCATCCTCA TGGCTCGCCA     600

GGAATACCTG AAGGCCGCGC TCCTGTACCG AAGCGGCTAC GAGCTCTACT ACGATGAGTA     660

CCTTGCCGAC CCGTCAAGTC CGGGGAAAAA GGAgGTGCGT GCTCGCGTCG AGCAsgCAnA     720

TGcGCATGTT TCCCGCGCAA AGCCCCTCCT AGAAGCGGTC GCCGCTGCAC GGGCTCAGTA     780

TCAGAACACG CAGAAAAGGA CGTATGCTGC CAGCGCCCAT GAaGGCTGCG CGCGCGCGCG     840

AcGCGTACTC TGCCGCCCCC GTGCGCCTGC TGcACCgGTG CCCGCGcACC GAGTGCAGCG     900

TATCCTCACT CCTTAACGGT GGAGGCAGAA TTAAGGATTT TGCAGGACTT TTCTAAAACC     960

ACTGAGGAAA GCGCCGCGCT CACTTCCCTG GTCCaAgCGC TTGGAGCGCT TTTAAAGTTT    1020

TCTCGCGACA TAGAGCACAC CGGTGTTGTT TTTGAACAGC TATCCACACG CGCGCAGAAA    1080

AATAACGAGA CACAAGAGGC CTTCTTGGCC GTTGCACGCA AAATTACGCT CGGGCGCAGT    1140

AAACTTGAGT TCGAAGGTAT TCTCGGCGCG CTCCAGGCTC CTGCCTTTGA CGCTTTTGTA    1200

GATCTTTTTG AAGCAGGTCG CGCACATGTA GCGGCGCTCC ACGACCAGGC GCGCGCACAG    1260

TTTACGTTTG CACATCCTCC GCACTCAGGC AGAAACATTC CCGCACCCAC CGACACTGcA    1320

CTGGCAAGTG CAGGCGCATG GGCAGCAGTC GGTGCAGGAC CTGCAGGATC GCTCATTCCT    1380

GGCGCTCCTC TCAGTGCGGG AGTCGGCTCT CGCGGCGCGT GGGGAGCGTT GCCTGCGCCA    1440

GTAGAGCCGC TGCTCCGCCA GGCGGATGAC GCATTGGGTG CGCTTGCAAG ACTGTGGGCA    1500

GCGTGCGCCC CGCTCGGTGC CCAGCATGGC AGATTCCCC GCGATTATGA GACCTTTGGC    1560

GCGCAGATTG TAGCGCTCAG TGCGCACGCC GAgCGTTGCG CGCCACAAAA CACGCGTACG    1620

ACTTTTACCA TGCACTGCTC GCCTTCCAGC GCGCCCCCAC CGTGCCTGTT TCGGCTGCAT    1680

TGCGGCGTCA GGACCTTTCC CAGAATGAAG CGTTCGCGCG GgATCTGAGC GAACTTGCAC    1740
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ACCACCAGGA GTTTTTGCGT CGTGCCCTTG CAGAAACCGA GTCTCTTTCC CCGCCTGCAG    1800

ATACGGCAAG CaCCCcGTCA CCGGGGGGTG CAGGGGATAC TCCAGTGCCC AGCCAGGCTG    1860

ATAAGGGAGG GGCAAAACAG AGCGCTGCCC CTGATACTGC GCAAAAGGCA GTAGCCCAAA    1920

AAGCGGGTGC GTCGGAGGAG GCTGACGCGT CGTCTTCCCC CTCCGAAATG GCGGTGCGTG    1980

CGGCGCGTGC ACAGCTGCAT GCCATCCAAA GTGAGCTGTT GCGCcGCTTC ACGcgCtTCA    2040

AACGCAACCG CTATACCGCA CATATGGCGT TTCATCAGCA CTCAGGCGTT TCTGCGCTCG    2100

CTGAGTATGC GCAgnAGcTT aCCAGTGCCG AGGAAGCATT GCGCTTTGAC GCGAAAGACG    2160

AGCGCAGGGT ACGCGCGTTG AGCTTTGTGT CTGAAACGGG TCCTCAGCAG GTGAGTAAGG    2220

ATATGGAGGC ACTTGATCGG TTGCTTTCTT TTTTTTCTGG CGAAGAAGAG TTCCTGTCTG    2280

AGCGTGGCTA TGCGTATGGG CTGCAGTCCC TGCGTGATTT GCGCACTCAG TTTGAACAGT    2340

TCTCTGCACG CGTGCAGACA CTTTTTTTGG CAGCAGAACA ACGGGCTATT CACGAACGAC    2400

TGGCGCGTCA AGAAGCAGAG TACCGTTACC GACAGGCAGT GGAAGGTCTA GGTCAAGATG    2460

ACTTTGGCGG TGCCCGTAAG AATCTGGTGC TATCTCGAGA AAAGGCCGAT TTGGCGCTCT    2520

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TCAGAGGAAC GTACAAAACC GAATCAAAAA AGGCCTACAG TTTGCTCCTA GATTTGTACG    3120

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ATCAGCGCGC cTTGCAGGAA CTCCAAAAAG GAAATAAGCT CGTCGCCTCC GCGGTGGTTG    3480
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GCGTCTTTTT ACGATGGCAG TACGTGGCAT ACCGTGCGTA CATTTCTCC ACCCCTTTTG       3840

TACAACCACC GTTCTCCTTC TCTTGCCTCC GTTGCTGTTA ACAGAAAAA TGAGATTTTT       3900

GTTGCTGCCG CTTTTGATGC ACACACCATC ACCGTCTTTA AAACTACGGA TTTTGGAAAA      3960

TCATTTACGC ATACTGTATT GCGTTCTCAG GGAAGCGATA TTGTCGCCCC CTATGTGAGT      4020

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GCGCGGtACG CATTGTATTT CCTCGGGATT CGTCAGGCAT TGCAGGGTAT AACTACGCGT      4860

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tGCGCGTCCA CAATTGCAAA CTCCTCTACT GGAGAACACG CATGCGCTGA AGAGCAACAC      5100

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CACCAGCTTC CTTTGGAGCT TACAACAGGT GGCACCGCTT TCAGCACTAA CGTCCCTGCG      5220
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TGTGGATACT GATGTACGAA CGTTCGAAGA ATTTCAGCAG CGCTGCGTGC GCGCCTTTCC    5280

TATACCTGTG GAmGTGCACG GCAcGCGCAg CAGGcAGTCG TCCGTATCGT TCACTAATAA    5340

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GTGGCGATGA TTCGCGACAC GGAAAAAAAG GAAGAACTTG AAGGAAAACT GATTGCCATC   .6960
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AAAGGGCAGG ATGAAATCGC TCTCCTCGGA AGAACTATCA ACGATATGAC AGAAGGGTTG    7020

ATCAAGGCGG CGCTTGCCTC AAAGGATTTG ACGGTTGGAA AGGAAATTCA AAAGATGTTC    7080

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TTTnGnAGAA TTGG   9974

(2) INFORMATION FOR SEQ ID NO: 75:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 5861 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 75:

AGGAAGCACT GGAGCACGTC CGnAAGCACC GTCTCGCCCA TGCGCGTACC ACGGCAACAT   60

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AACTTTGAGA TTCAGTATCC CCGGTCTCCG TGCACTGTGC AGTAAAGTGA TGCGTATACG     120

CTCCCTTTGG GAAATCCCAC ACATGCAGCT GCGCGAACAG CACACACTTC CAGCGTGCAT     180

CAGAGTCGCG TTCAAGACGC CTTACCTGAG TCAAGCCAAA CACAAGTCTA CGGACATTCC     240

CCCCAAACTT TTTACGCGCG CGCGrAwTTA CCGCGTGGTC CGGCACCTTA CCTACCCCGT     300

ACAAACTATC AAGCCCGATG TTCACAAACC GACGCTTCAA AAGCCCCCCG aGCAAACGGG     360

TGGCCGTCAG ATTCTCGTGC GTCAGGGrCC GTCCTGTCTT CCCATAATCT AGAATACATA     420

TCGTTGTAGA TACCTGCCTG CGCACGGGAT GCTGTTTTGG ATCAGACGAA GGCGCCGCAA     480

CGCGACACAC CAAATTAGCA AGCGCAGGCT CCCCCGCTGC GCTGTTTTCT TCCCCCTCGG     540

GGGACGGTAT GGTAGACACG ACAGgTTCGG GAGATGArGG TCGTTCCTGC AACGCAGAAT     600

CCTGTGCACA AAGGGAAGGA GCATGTACCA AAGCGGCAGT GTCAAACGAA AGCGTCACCT     660

CCTGCGAAAC GCCGCTGAcG GAAAGGGGAA AAAGAGCACT CCCTGcGTAT CTGCGCACAG     720

CGTCACCTGC ATCACATCGC CATGTTCAGG ACCAATTTGG TAGCATAGCG TaAAACGCCC     780

ACGCTGTAGT GGCCACACGC TGTCGCGATA CTGCAACGTG GCACTAACCC CTACATGGGT     840

CGGCGGTGCA ACGCGCGGAG cAAGGcGTAT ACCTTGcAGC AGCGCACGGA CATACGCGTG     900

CAGcGCAcGG CTaCGCGCCG TGTCAGTCTC AGAAGAAGGG TCATATAACG CTTCAAGCTC     960

ATTGAAAGCA GCGTATGTGT CCCCCGTACA GAGCGCATCC GTGATGCGCA TTACCCTCTT    1020

CTGTGTCAAA AAACGCCTGC AATGCCGCGT GGTGCTCGGC AGGGATATGT CCAACAGTAC    1080

CCTGcACCCA CGCAGACCCC CGCCCAGGAG AAAAAGACGC CGGGGATTCA GACACACTCG    1140

CATCTGCCGC GCCCGCCTCA TTCCCCATTG CCGCAGCATG AGAAACATGC TCAGAAGCAT    1200

GGGCCACACC CGAAGAATTC AGGCCATCCG CATTCAGGGA AAAACTTGAG CGTGTCTGTG    1260

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ATAATCTACA CCTCTTTATT CTGCAGCGCA CACCACAGCC GCGTGCTAAA GTACCGTCAC    1380

GGGCCtTCGT TACAGCCACC CTACGATATC CACCAAAGAC ACATCACGTC TTCTTTTCGT    1440

TAGGGACGTG CAGGACGACG CCGACACCAC CCATACATGA ACGCAAAGCA AAATGCCCGT    1500

CGCATCGCTT CCGCACGGcT GCGCGCCTTC CGCGCCTCCC CTACCGCTCC TGCCTATCCA    1560

GCACACTCCC TTTTCACTGC ACAGACAGCG TACCAGCGTG CACGCACTGT GTTCTTCTAT    1620

GCGCCCCTGC CCCTAGAAAT AGACCCCTAC GCCCTTGCAT ACACTGCAGA AAACGCAGGA    1680

AAGCACGTAG CTCTTCCTCG CGTATCGGGA AACGACTTGC ACTTTCACGC AgTCACGTAC    1740

GCGTGCACTA CCCGCCCCTC TGTTTCCTGC TTCACCACCT TGTGCCCTAG GACCAGGGGA    1800
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GCCGCTACCA TACCAGCAGG GAGCTACTAC ACGCTCGGCC TCTGCTTTGA TTGCCAAATC   2040

ATGGCTGTCA TTCCTCAAGA AGCACACGAC CAATCCGTAC ACGCGGTGCT CACCGAAACT   2100

CGTCTCATTT CCTGTGCCAC GGCGCGTGCA CCAGCGCCAC CGTTCTCTTT ATAGTGCCTT   2160

ATTCCTCCAT TCTAATCACA CACGTGCATG CACCAAGAGG ACAGCGCCGT GCTATCTTCC   2220

CAGAAAGGAG GATGAAAACA CGTGAAAACC ATTCTCATAC TGGGTGCAGG AACCATGCAA   2280

GCCCCTGCAC TTCGCGCAGn ACGGGAGCTT GGGCTGTGGG TGTGCGCGGT AGATGGGAAT   2340

CCGCATGCAc CsTGCGCGGC ACTTGCAGAC GAGTTTACCC CAATCGATTT GGCCGATAGC   2400

GCCGCGCTCG TncGCTnCAm gcGCcGCAAT TcGCGCGCrC sGCGGCTTGG ATGCTGTGTT   2460

CACCGCGGCA ACAGACTTTT CCGTTTCCGT CGCTGCCGTC GCCGAGGCCT GTGCACTCCC   2520

CGGCCACCGA TTGGAGGCAA CCAAAAACGC TACGGATAAA ACGCGCATGc gTGCCTGCTT   2580

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GGCCTTGCAG ACGCTCAACA GATCGCCTAC GTCAAAAACG TGTTCGTACG TATGCAGGAA   3480

GGAGCCgcgG TGCGCTTTCC TCGTAATAAT GTGGAAAAAT GTGGCAACGT GCTGAGTCAG   3540

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GCCCCCACCC GTGCACAGnT ATCGCCGCAG CAGAAACCGC GTGTCGCTGC ATTGTACTCC     3600

GCCTTGTTCC TGCACACCCT GCAACAGACG CCTTTCTAGC AAGAAAACGC AGCGCAGAAT     3660

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TGCGCGctGA cGCACGAGAC GTGCAGGGTC GCAGCATCCA TGCGCTGTGT ACCCTTGCAC     3900

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AGTTATGGCG CGCACTTATT CGCGGTGGCA TTCAAGGATT ACTATACGCG TTTGACTCCT     4020

TTCAACTGTC CTGATGTTCA GTGCCAGAAA AAATAAAACG CGTGCGCAAA AGCTCTGCGG     4080

cCTCAGTCAT ACGCAGCCAC GTCAGTCCCT GTGCACAGAG AGTCTGCACG GACGCGGCCG     4140

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GGACCCCTGC GCGCTGCATA TCCTGCAGCG TACACACAAC ACAATGCGAG AGTGCTTCAC     4260

CTGCTACGAA AATACGCTCA TGTGCGCGGA GCATTTGGCA GCGCTTAACA AAAAGAGAAT     4320

CCGCAGTCCC TTGAGACGCT GGATACTCCG AGGACAGCAC ACTAAATTGT TCCACACAGG     4380

GGTTTTCTCC TTTAAAGAAA AACTGAGGAT GTCTTGTACG ATGCGCGCGT TGCCAAAAGC     4440

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CGGTCTGTAC ATAGCCGACA CGCACAGGcA CACACGCCCC AGAACGCAAA CGTTCGAACG     4620

AAACTGTATC AAAAGGACCG AGAGCATCTC CTGTCAGGGA GCGCCAAAAA CAGGGGTGCG     4680

CAACGTGCAT CCGCGGGTGC CGATCGCAAc TTACGTACAA TGCATCCACA TGCGCAGCGT     4740

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TGATATCCAC ACCCGTAGAA GGCAGAAAGA ACGCCCGCTC TCCCATACGG AGTACCCACC     5220

CCAATAGGAA CTGCGCGCGG AACAGGAGCG TAGAAAGCCC CGCATCTAGC TGcGTGACGA     5280
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AAGTAAACCC GTTCTCCGCA GAAACCCCCA CCGAAAGCCC CAGCGTGGGG GTGAAGGCCA   5340

GTATATCGGT GCGTTTCGTA nCTTGGTTCC GCCCTCAnCG TTCGCGCCcT TTCCCCACAC   5400

AAaGAcTCCC ACCTGTCCAA cTCGGGGAGA AACAAAAACt GCGCGGCGTT CGCGTCAGTG   5460

CAAgACCCCA CAACACCGCC AAAAgAGCGC ACCCCCCCCC gCCACCGAAC GGCGCAgCGG   5520

CACATCACCT CACCCTCACA CCAACCACTC ATACACTACA CTCGGAACGT CGGCCCTATC   5580

GTGAGCGAGA GCGGCAAGGT AAACTCCTTG AAATTAAAGT CACGAACACC AACGGCCGTG   5640

CTCGCAGCAA CCGCAACTCC GGCAAAGGAA GTGAGATAGT ACTGCACCTC TAAGTTCAAC   5700

GGTACGCTGT ACAGCAGCTT GCTATACCAC GCAGACGATT TCCCCTCAGA TGTCGCACAC   5760

GAATCACCGC AGATATTCAC CCCACTGGAA ACGATGGCCC GCAGCCCTCC CACACGCACC   5820

GCGTAGCCAA TTAACGCCTG TGCACGCACA AAGACATTGG T   5861

(2) INFORMATION FOR SEQ ID NO: 76:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3694 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 76:

CGAGTAGGAG ATACATACCG ACACTCAGGG TTTACACACG CAGTATATGT GCCGACTCTG   60

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AAGTGAGTGA CAAAATCGCA GACAGGGAAA CGCGTGCAGC CATAGAATTC CTTTCTTCCC   180

CTTGTTTTTT TCCCCACGAT ATTCCCATCG CACGCAGGAC GCGGACACTT TGCAAGAGGG   240

ACAGGCTGAG TATTTCTACA CTCAGGAAAC TTTCCGCATG CAAGGAAAAA TCCAAACCTG   300

CCCAGTTTTT TCACCATCGT ATCACCACAC TGACTACACA CCACATCTGT TTTCTCATCG   360

AACACACCGC GCATGCTGTT AAGATCTTTC ATCACCGTTG AAACCTTTTC GCTGAAAGCA   420

GGATAGAAAT CCGCAATGAC ACAATTCCAC TTGATTTTAT CTTCCTCCAC CTCATCGAGT   480

TTACTTTCCA TGCGCGCGGT AAAACTTACA TCAACAACAT CATGAAAATA GGTGGTGAGA   540

AGATCACTAA TGACCTTTCC CAATGGGGTC GGCATTAGCT GTTTTTGAAT ACGAGTTACA   600

TAATAGCGAT CCAGCAGTAC TGAAATAGTC GGTGCATACG TTGAAGGGCG CCCAATTCCC   660

TTTTCCTCCA ACATTTTTAC GATACTTGCA TCCGTGTACC GAACAGGACC tGCGTAAAGT   720

GCTGTACGGA CTGCACGTTA TGTAGTGCAA CTACCTCACC TTCCTTCGTA GGGGGAAGTA   780

592

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CAGCTTTAGA GAGATCTTTG GGGGATAACA TTTTCAGTAC ACGGTAGAAT CCCTGTTCAA      840

TAACCTGCGT TTCAGTTGCA CTGAAAACCG CCGGGCCAGC GGTAATTTCA AACGTCAAAC      900

TGCGCACTCT TGCATCTGTC ATCTGACTTG CAACAAAACG CTCCCAAATC AACGTGTACA      960

GACGTATTTG ATCACGCGTA AGGTGCGCTT TAATCCGCTC AGGAGTGTGG GCAACATATG     1020

TTGGTCGAAT CGCCTCATGT GCGTCCTGAG ACTTTCCCTT TGCAGCGTAC CGATTGGGAG     1080

TACCCGGCAG TGCGTCAGAA AAATGCGTTG CTATCCACGC GCGCACTTCC TTTACAGCAG     1140

CTTCAGAAAC GCGCACCGAA TCTGTACGCA TATATGTAAT GAGCCCCACG CGGTGGGTAC     1200

CAAGAGATAC GCCTTCATAG AGCTGCTGCG CAACCTGCAT CGTTTTACGC GAGGTAAACC     1260

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TTGGAACCGG ATGGCCAATT GCCGCCCTAA TCGCGTGCGG TGTAATTTCA TTAAACACGA     1740

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TGCGCAACTC TTTTAAACAC TGCGCACGAC CACGAACTGT AATGTACTCA GGCTGGAAAT     1920

CGTGCTCAAT ATCAATAGCT AAACGAGACT TTGGCAAGTC AATAACGTGG CCCATGGACG     1980

CTCGCACCAC GTAtGCGTTC CCAGATATTT TTCGATGGTC TGCGCCTTCG CAGGAGATTC     2040

CACAATAACC AAATGcTTCC GCGCAAATGT CTTCTGCCTT TTCGGTTGTA GCCCACGCAC     2100

TTCCATGTTT TCCGCCCCCT ATGCTTACCG AAACTGTCCT ACGTCCGACC CGTACATGCG     2160

TATTCCCAAT CGTCAAACAT ATCCTGcaCG CACGTCAGCG CGCGTGCACC TTCTGCATGC     2220

AGAAGTCTTC CTCCCTCATT TTGAAGACTT TCAAGCAAGG GTTCATACAC GTACACATCA     2280

CGTCCCTGTT CCAAGGCACA CAATGCGGTA ATCAACGCGC CTGACTTCTT TGGTGCTTCC     2340

ATAACAACGA GCGATCGTGC CAAACCTGAA ATGAGCCTAT TGCGTTCAGG AAAACGATAG     2400

CGCATCACAT GCTCAGATGG CGCATATTCA CTCAGAATGC ATCCTCCGGT TTCTATAATC     2460

CGTGCAGCAA GCGCGCTATT TGAGCGTGGA TATAACTGGT CTACACCACA GGCAAGTACT     2520
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GCGAGGGTGT ACCCACCACC TGCTAATGCT CCTTTGTGAC AGAATCCGTC TATTCCACGT    2580

GCAAGTCCTG AAACAATGGC AATGCCCGAT TCAGCACACG CCTTGGAAAA GGCCAAACTG    2640

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TCCAAGTGTG TAGTATGCGC GCGCAAGAAC GAACAAAGCT GCTTCTGTAT TTTCTTTCAA    3240

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ATACGCAGAG ACTgcTAACG CGCGATAAGC AGCTTGCTGC TGCATTTTCT TCTCAGGATC    3420

AaTAGGAGCG ACGTACTTAG CCGCATATGC GGCACACAAC GCCTGGTAAA AAAAAAGATG    3480

CTTATTTTCG GGAGCAAAGG TAATGGCCTG GGTAAACGCA TCAAGCGCGT GCGTATACAT    3540

CTTACGATCG AAGTAGCGCA ACGCGAGCAT CTTGTACCAA ACACCCACCT GATnCnCnGT    3600

GCGTGCAAAC GCTCGAGGCG CTGTTCGTGC AGCTTTACTG CCCTCCGCAG TTCTTCAATA    3660

GAGGTTGGAT GGGGCACTCC TTTCTCTAAA TCCT    3694
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(2) INFORMATION FOR SEQ ID NO: 77:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 6422 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 77:

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AGGCTATTTC CATTGACGCA AGAAATTTCT ACTAAGTCAT CTGCAACAAG TCGATGACCG    120

CGCTCAATTA ACTCCAGAGC AGTCTCACTT TTTCCTACTC CTGAATCTCC TGAAATAAGA    180
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ATCCCGACGC CATACACCTC CACCAATACT CCATGAAGCG CTATCGTCGG TGCGAAGATA    240

TTGGAGAGAA CACGCATGAG ACGTAAAGAA AGCTCGCTCG ACGTAAGACG AGTGACCAAG    300

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GAAAAGATAC AACAAGGCAA GTCAAAGGTG AACATCTTTT CGATAGCACC GTATCGTCCC    420

TGCTCTAAAA GGGCGAGCAG ATACGCATGT TCTCCGCGGC CAAAAAGCTG GATCCGCCGG    480

TAGGnAAACA AGTCAAAAAA GCCTGACAGG ACAAGACCTG GTCGGTTCAG ATCCGAGATA    540

GTGATGGGAT TTGCCAGTCC ATGGTGACCT GCGATACAAC GCAGAtCAAG CGAATCGCGC    600

TCTTTCAGAT CGAGCTTGAG CACATCGAGA ACGGTAAAAA GAGGAGCACC CACGGCCGCT    660

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GGGGCTCGAA CCCGCGATCT CCGGCGTGAC AGGctGGCGC GATAACCAAC TTCGctACGC   1080

CCCCAGAACT TGCGCGCATC CTACATCACC CGCACAAAGT TATCAAGCGG CGATGATAGA   1140

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TAGGAAAGCC CGTATACGTA CACAAAGCAC TCATCACACG CTTAAACGCA GTACAGGAAA   1920
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GGGAArctGC  GCATAACGAA  GATTGGATGC  ACATCCCCAT  AAAAAAGCGC  TGGGCTCCAC     2160

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TGTGGGACAC  TATGCACTTC  GAATACCGGC  CGGAATTACT  CGCTGTACGT  AAAATCCTTG     2280

CCGAGGGGAA  CCGCTATGAC  TTTCAAGAAC  AAAATATAGT  GGTGCATGCA  GATGATTTTC   · 2340

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CGACGTCCCT  CTTCAGTTTC  TAGGGGAGCA  TTCCCCTGAA  CCGAAGtTAT  TATCGACGAG     3540

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CTGCGGGAGA CGCGCTCCTC TCGAAAACAC CCCAGCTTTC AACGCACAGC GAGTACGTGC      4560

CGGCGACACT CGCAGAACTC CTGGGCCGCA ACGCAGAGCC CGGCGACGTC GTGCGGGACT      4620

CAGCAGTCCT CGAATATATC GAAGGCtCTT CGACTATCGT CCCTGCTGTT TTTATGAGAG      4680

CCACGCTGTC CACGACTGCC TAGAAGTAGT CACGGGAGAA GACGGCCCCT CTCTCAGCCC      4740

TATGGAAAGC ATCGTCAGCA CCGAGGACGG TCTTTTCACC ATTCGGGTGA GTAAGGAGGA      4800

AGGAAACCAC CTCAACCGCG ATTTCAAGGC CCTGGTGGAT TCCGTACTGT ACTGAAGAAC      4860

ATATCTTTCC GCCGGTGGAG CCGGTCCTCT TACTCGGAAG CAGGCACGAA CGTGTGCGCC      4920

ACCACGTTGG TTTTTATGAG CTCATCGACT TCCGTCTGGG AAGACCTGAG CCAGTACTGG      4980

CTTCTGCCaA TCCCCCAGCT GATTTCCCCG CGCATCTGCA GCGTATCAAm CTTGTAGCTC      5040

CTCCCATCCG CcAGGGATGA AATTAATTTT GCAGTAATAG TACTTACCGC TTGCAGGATC      5100

TATTACGTAT CCACCACCCC AGGAGCCTGG AGAAGTACGC TCGAGGTTAT AGATGAAgGG      5160

CGTACCAACC AAGGGCATAT TGGCGACGTT TCCCTTCTTG GAGAAATCAG GATACGTTCT      5220

TGTACACGAA ACCACCGCCG CATTCGGAGC CCTCCCCATG CACACGAGGA TCTTGCCAAA      5280

GAGCTTACCA TCCTGAACAT ACAACCGCCA CACCCCAGTG GGTTTCCCTG TATTGTCATC      5340

AACGCTCTTC CAGATACCTT CCACCGGATC GGCCATTTCC TTCTGCACAG ACGGCACCTG      5400
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ACTCCTCTAC ACCGATCGCA CACACCCTCT CTCTTAnGsT GCGCAAAGAG CACATGATAA   5820

CTGCTCCCAC AGGCCGmACA CACCtGCGGC CAGTAAGACG CGCAACAAGG ACATCGTCCG   5880

GtACTACAAT ACTCACCGCG TAGTCTATCG GCACAATGTC CTCTAAGCAC CTAGCCTGCG   5940

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CACCAGGAGG ACCAAGAAAA ACAAACCTCA TGAAACAAAC TCCACCTTAT CTTCCTACGG   6240

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ACGCCGCGCG CGCCGCGAAA CCCCGACCGC CCAAACAAGA GCGCACCGGT ACTCCAATTC   6360

TACACGGGGA GGATTCATTG GCAACACAAA ACTGCGACAT GCTCGATAnA nCCTTATGTA   6420

CA   6422

(2) INFORMATION FOR SEQ ID NO: 78:

        (i) SEQUENCE CHARACTERISTICS:
             (A) LENGTH: 4646 base pairs
             (B) TYPE: nucleic acid
             (C) STRANDEDNESS: double
             (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 78:

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TAGGCAGTGC GATAGTCATC GCGTGTAAAA AAAGAGCACT CAACGCTTTG GTAAAAAACA   240

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GCACGCCTCC TAAAAACAGG ATTTGAAATC CTTTTATTTG CAAAAAAACA AGCATCGCCA   360

CAAAGTTCAA AAACTGTCCC ATCAAAGGAT TTTCTATTTG TGCAAAGGTA TCGTACATCT   420

CAGATGTTCC AAAACCCATC TGATACGAAA AAAACTGTCC TGCCGCACTA AAAGTCGTAA   480

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AcAAGaGaGG TACCGTAAAC ATaAGcGcAA ACACGcGGAc CGCCGwCAAG aAAAAAAGA   720

GAAGCCTGAG aAAAgAGTGC ATCAAAGGAC CGTTCCATCG CACATATCCA CTAGACAGGT   780

CCACTCCTCA CTAACTGAGG GATAATGTCA AACAGCcTTA CGGTATAATT CTGCAGCATT   840

GTCAGCATCC ACCCACCGAG GAGGGCAATC ATTCCCAATA TGGTCAACAT CTTAGGAACA   900

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CTTCTGTGCA GAAGTCGCTG ACACCGCTTC TGAAACGGCA GAAACATCTA CCCCCTGCTG    2520

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CACCTGAAAG CAGGGCATCG ATTTCAGCCT GAGAAATAGA GCCGTCACTC ATACAATTCC    3660

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ATCTGCGCGG CAATCTTTTT TCCCACCACC CCAGGcTGrs AsrrAAACTT CTTGCGGTTC    3780
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TGCGCACCGA AGAAAACCAA AACTGACTCG ACAACTTAGA AATGATAGGT TCTATGGTGA   4020

TGTACGGAAT GCAAAAGTTC ATCATCCCCT CTTCCTCACC TACCTTTGTC TCGAGCGTCA   4080

CCAACACCAC CATCTCTGAG GGAGGGACGA TCTGCGCGAA TTGCGGGTTC GTTTCAATTT   4140

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TGGCTGCCTG TCCTGTTCCT CCAAAGAGGC GGTCAATGAT AGAAAAAGTA ATGGAGGGAT   4320

CCACCTCAAG CAtGCGTTCC CTTTGAGCGG ATCCATAGTG ATCACCGCAA GCGTAGAAGG   4380

CGTGGGAATA GAACGGATAA ACTCCTCGTA CGTGAGCTGA TCTACCGACG CAACGTGCAC   4440

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TAGAGCGTAA TCTTaCGGGT GTCGCTGATA GGGCGCGCAT CTTCAATACT TGmATCCCCA   4620

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(2) INFORMATION FOR SEQ ID NO: 79:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 11191 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 79:

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AGGAAGACGG GGACTTTCCG CAGCGAGTAT TAACCGAGTT TTGTCCGTGG TGCGAGGTTT   240

TTATGTGTTT GCTAAAAAAA AACATTGGTG CGCGGACAAT CCTGCACGCT TAGTGAGGAA   300

TATAAAAGGT CCTTCAAAGT TGCCTCGTTT TATGTTTCCA CCGCAAGCAA AGGCGTTTTA   360

CACCTTACCA AGTCGTACGG ATATTTTGTG GCAGGAACGG GATGCGGCAC TTTTTGCGAT   420

GTTGTATTCA ACAGGATGTC GCGTTTCAGA GATAGCGGCG CTCTCATTGA AAGATGTGCA   480

601

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TCCGCATCTT  AGTTCTGCGA  TTGTGCGGGG  AAAGGGTGAT  CGGGAsCGGA  CCGTGTTTAT    540

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GCGCGGAATA  CAGTACCTTG  TTAGTCGGTA  CGTGCTTTTG  GCCCAGGACG  TGCACGCGCT    720

GTCTCCCCAC  GCGTTCGGC   ACAGTTTTGC  TTCGACGTTG  ATCCGTCGGG  GGGCTGATGT    780

GCgCGTTGCg  CAAGAGTTAT  TAGGACATGC  GAGTGTGTCT  ACCACCCAGC  GATATGTGCA    840

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CGCTAGGTGT  GTTGCGCGTA  CAgTCTGTGA  AGATGTCTGT  GCTGTGTGAG  GGGAGGATAC   1980

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GCGCGCTTTT  GATCAGGTAA  ATCAAAAGCA  GCAGAAGACT  GCTGAGTTGA  CCGAGCAAAT   2220
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GCGCAATACA GACGcAGATG TGTCGGTCAT TGCCCTTATC GGGGAGCGTG GCCGTGAAGT    6840

GATGGATTTT GTTGCGCATG ATTTGGGTCC TGAGGGTTTG AAGCGCTCGG TAATAGTTAG    6900

TGCGACGTCT GATGAAAnGT CCTTGCGCGG GTACGAGGTG CGTACACGGC GACAGCGATT    6960

GCAGAGTACT TTCGGGATCA AGGCAAACAG GTGCTGCTGC TGTTTGATTC TCTGACGCGC    7020

TTTGCAAAAG CTCAGCGTGA GATTGGGTTA GCGTCGGGGG AGCTCCCTGC AACGCGTGGA    7080

TATACCCCGG GGGTATTCGA AACGTTACCG AAACTGCTTG AGCGTGCAGG TTCTTTTTCC    7140

ATGGGGAGCG TCACCGCTTT TTATACTGTT TTGGTAGATG GGGACGATCT CGATGAGCCG    7200

ATATCAGACG CCGTGCGTGG AATTGTAGAC GGGCACATTG TACTCAGTCG CGCGCTTGCg    7260

cAGcgCAATC ACTATCCTGC AATAGACGTG TTGCAAAGCG TTTCTCGCTT GGCGCACCGC    7320

GTGCTGGGTG CAGACATGAA AGAGGCAGTG CGCATAGTGC GTCGTGCGCT TGCAGTGTAC    7380

GCAGAAGTAG AGGATTTGGT ACGAGTTGGT GCGTACCAGC AGGGGAGTGA TGCAGAACTT    7440
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GATCGAGCTA TTGCGATGCG CGCAGAGCTT GAACGGTTCC TAACGCAAGG AGCCCAGGAG   7500

CGCGTGCGTT TTCAGGATAC TGTAACGTCG CTGTCCATGC TGACAGGGCT CAGTATAGCA   7560

CAGCCGCCTT CGGGTGTGTG AATCTGCAAG AGCAGAGGAG ATAGCGCGTG TGAAAAGGTT   7620

TTGTTTTTCT CTTGAGCGTG TGCGACGCTT GAGAGCGTTT CGTGTACGCG AGCTGGAAGT   7680

TGAGTTAAGC AAAGTTCTTG CAGAATACGG AAGCATAGAT ACACAGATTC GATCGATTGC   7740

TGGCGAGTAT CGTGCGCGGA TGCAGGACGT AGCGCCAAAG CGTGGAGCAG TTTTTTCTGC   7800

TGCGTCGGTG AGCGCTGTGC AGGATCAAAT TGACGTGTTG CAATTACGCC GAGAACAGCT   7860

GCTCCATAAG CAGGCGCACC TTTCTTTTAC TCTTGAGCAA TTGCGAGAAC GATACGCGCA   7920

CGnGCGCCGT GCACACGAGG CTTTGCTCAT GCTTGAAGAA AAGGAGAAAA CACGCTGGCG   7980

AGAGCAGCGA CTGCGCGCTG AGGACCGAGC GTGTGACGAC CTGGTCAGCG CACGCGTaCC   8040

TGGTGCACCC AGCAAGCATT AATGGCTGGC GCGCTGCGTG CGCGCTcGGG TGTATGAGGA   8100

AGGCGGTCCA TGTCCGTGGA AGAGTATGAG CGTTTCGTGT GCCGTGCACG CTCGTTCCAA   8160

GATGGTGTCT GCCTCATTTC CCGCTTCTTC GTACCCTGCA GAACACAGAT CCCCCGTGAA   8220

CGCAAGGTGT GCAATACGGT ATAGGTAACA GCCATACGCA GGGGATGCAA AACAGGTAAC   8280

GGTAAAACCT GCGCAATTGA GGGAACAGTC TCCCTGTAAC AGGGTGCTCT CGTGGGCATT   8340

CCAGCACTTT TCCCCGCAAA AGATGTGCGG GGAGTATACG CGCAAAAGCG TGCGCACGCC   8400

CGCTTGGGTT GCGTCATCTG TGCGGGTAAG AAAAACAGCC GTCAGGGTGC AGGAATTCTT   8460

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AATGTGCaGT GCGTAGTGTG CGAGGGCATA AAGTGCGTGT GTTGCACGGT GCAATTTTCA   8700

AAACGCACTG TTGCAAGCGT AGCGTGTAAG AAACGGGTGT GAGAAAGATC GCTCTCCTGA   8760

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TGCATGAGCT TAGCAAAGTC CGACGTAGAG CAATACGGTG TGGGTTCGAA CATGCGCGCA   9120

AAGCTTATAC GGGCTGGACG GGTGTGGTGT CAATGTATGC GGTGTGCAGG ACCTGGGGAT   9180
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